FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

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Los Angeles Mirror photo by Jim Harris, looking north, shows why fire attracted sight-seers. Observatory where command post was set up is at right center. Fire burned to right of observatory before control. See story page 914.

THERE ARE HIDDEN VALUES IN EVERY MAXIM

ASK A MAXIM OWNER HE KNOWS

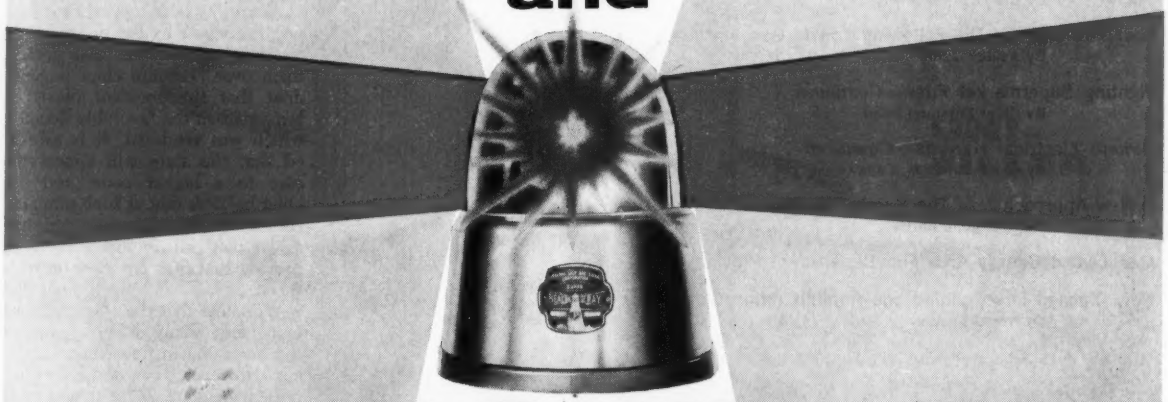
MAXIM MOTOR COMPANY, MIDDLEBORO, MASS.

MAXIM MOTOR COMPANY, MIDDLEBORO, MASS.

TWENTY YEARS AGO WARNING LIGHTS PROVIDED PROTECTION *AHEAD* OF THE VEHICLE. TEN YEARS AGO THE BEACON RAY INTRODUCED THE RADICAL IDEA OF *FULL PROTECTION* —TO THE SIDES AND REAR AS WELL AS AHEAD.

now FEDERAL *has added* THE 3rd DIMENSION

UP and



DOWN protection!

The STRAT-O-RAY throws light *"up and down"* as well as to the *"front, sides and rear"*!

The vehicle moves in a sphere of warning light; brilliant beams of one or more colors that sweep across the eyes of the viewer, whatever his relative position to the vehicle. In dense traffic, STRAT-O-RAY beams go *over and under* as well as *into* surrounding traffic.

The STRAT-O-RAY is a radical innovation in warning lights! Ask for Bulletin #351, TODAY!

UP-DOWN OVER-UNDER RIGHT-LEFT FRONT-REAR

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13602 S. WESTERN AVE., BLUE ISLAND, ILL.

FIRE
ENGINEERING
THE JOURNAL OF THE FIRE PROTECTION PROFESSION SINCE 1877

VOL. 114 OCTOBER, 1961 NO. 10

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Novel Legal Use

Recently the fire chief of a western city appeared as a technical witness for his community and testified in court concerning the necessity for fire hydrants along a state freeway. Supporting data in the presentation included back copies of FIRE ENGINEERING which reported fires occurring on superhighways.

According to the chief, the judge was impressed by the presentation, took the magazines and looked them over. The fire chief is confident that this incident played a large part in the favorable decision which was rendered. It is expected that the state will appeal the case to a higher court and the chief believes that at such time, the copies of FIRE ENGINEERING will again play an important role in proving that fires do occur on freeways.

We know that the chief, in common with many others, employs the magazine in department training. However, this is the first reported incident where it was used in a court case of this nature. Naturally we are proud to learn of this novel contribution to the cause of fire protection and we pass along the information as an idea for our readers' future reference.

The Publishers

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FIRE ENGINEERING, October, 1961, published the 1st of each month by the Magazine Publishing Division, the Reuben H. Donnelley Corporation, 466 Lexington Avenue, New York 17, N. Y. Edward B. Wintersteen, Executive Manager; George W. Hutchings, Division Regional Manager — Midwest; John Mileham, Division Controller; Thomas J. Hanly, Business Manager.
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Curtiss E. Frank, Chairman of the Board; Hamilton B. Mitchell, President; Edward A. O'Rorke, Vice President; Fred C. Ash, Secretary-Treasurer and General Counsel; Karl G. Clement, Controller.

ADVERTISING

New York 17—William J. Gibson and Joseph F. Cosgrove, Eastern Representatives, 466 Lexington Avenue. ORegon 9-4000.

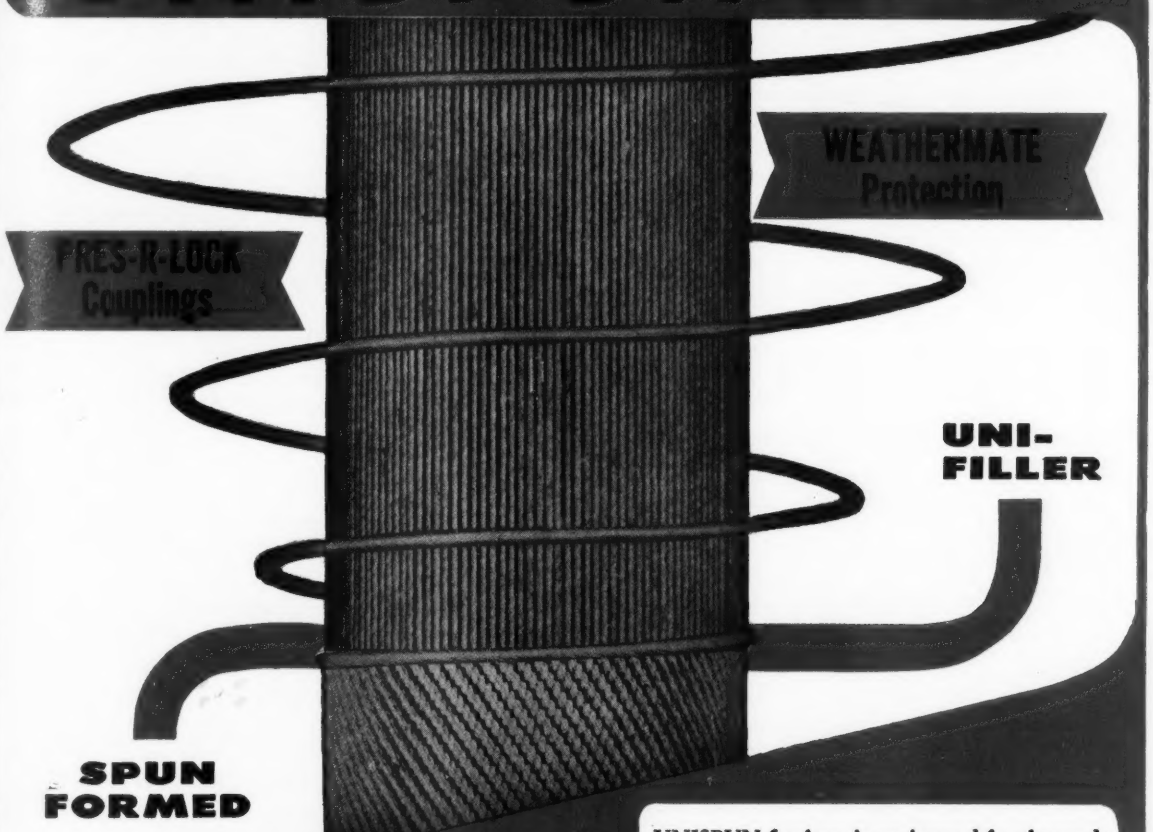
Chicago 5—Donald C. White, Midwestern Representative, 59 East Van Buren Street, Chicago 5. Telephone: 922-7738.

Pasadena 8—John A. Osborne, West Coast Manager, 1126 Del Rey. SYcamore 4-6328.

Subscription Rates: U. S. and Canada $4 a year, $7 for two years; Pan-American and Foreign, $5 a year, $10 for two years; Single Copy 50¢. Publication Office: 109 West Chestnut Street, Lancaster, Pa. Entered as Second Class Matter at Post Office, Lancaster, Pa., under act of March 3, 1879.

MAIL CHANGES OF ADDRESS and subscription orders to Fire Engineering, 466 Lexington Avenue, New York 17, N. Y. Please include your city delivery zone number.

UNISPUN FIRE HOSE



Continuous Uniform
Single Filament Filler
Co-Axially Spun Fire Hose

UNISPUN fire hose is engineered for the modern fire fighter. A major scientific breakthrough from ordinary methods of *weaving*, UNISPUN hose is formed instead by *spinning*. High performance fibers, after blending, are *spun* into constructions at high rotational speeds with extreme precision and uniformity. This new capability to produce *spun* tubular fire hose, another exclusive FABRIC achievement, is an effective assist to the modern fire fighter in search of the best equipment. For further details, write us today or contact your authorized FABRIC representative.

Spun formed to these PERFORMANCE specifications

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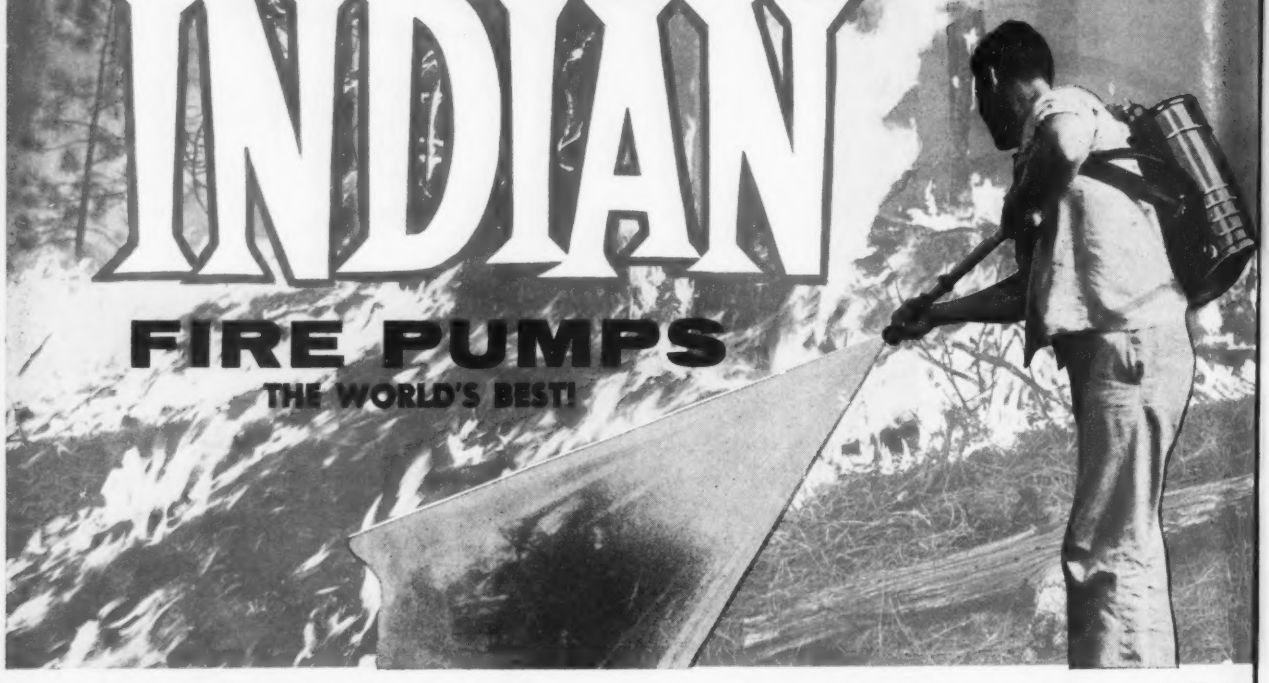
GRASS, BRUSH, RUBBISH and FOREST FIRES—
ROOF, CHIMNEY and CLASS A FIRES
CONTROL THEM ALL WITH
NEW
INDIAN
FIRE PUMPS
THE WORLD'S BEST!



For over 30 years INDIAN FIRE PUMPS have put out small fires before they grow into big ones. Pumps on new models have been shortened to 18 inches. Telescope handle, however, extends pump as long as before. Shortened pump will not snag on brush and is more compact for nesting in trucks and storage. Brass tank models are highly popular. Will not rust or corrode.

No. 90 INDIAN FIRE PUMP
(Sliding Pump Type)

Send for circular on our new **No. 90 FIBERGLASS** tank model. Light weight. Will not rust or corrode. New, shorter brass pump.

No. 90 sliding pump type shown above. Available in Armco zinc grip steel, solid brass or Chrome tanks.

No. 80 INDIAN FIRE PUMP
(Lever Type Pump and Handle)

Continuous high pressure. Pump throws strong stream or nozzle adjusts for spray or fog mist. Sturdily built to give many years of service.

All models of INDIAN FIRE PUMPS are approved by Factory Mutual.

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FIRE KING was the first fire hose with Dacron filler cords. Its amazing strength, light weight, ease of handling have made it a favorite with firemen everywhere.

FIRE KING BOOSTER HOSE. Extra strong, premium quality. Designed for higher pressures (1000 pounds) on the newest type trucks. Light, compact, extremely flexible.

FLEXSEAL is strong but light, easy handling. Protected against mildew and rotting by exclusive BFG Superseal treatment.

DIAMOND FIRE HOSE is so flexible you can tie it in knots. All-Dacron jacket outwears all others, is never weakened by mildew.

Good hose pays off when the pressure's on

All the money saved on "bargain" hose—and much more—can go up in smoke in the extra seconds it takes to get heavy, bulky hose into action or to replace a blown out section. The quality features in a B.F.Goodrich hose that prevent these delays add only a few cents per foot to its cost, but are worth much more when the pressure's on. And in the long run, BFG hose pays back the extra pennies it costs by lasting months, even years, longer than ordinary hose.

If you're looking for a good buy in fire hose, see a B.F.Goodrich distributor. He can tell you more about the four best-sellers shown on this page, and bring you up to date on the new features in the complete BFG line. *B.F.Goodrich Industrial Products Co., Dept. M-160, Akron 18, O.*

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FIRE HOSE

This is how you measure

Dependability of a Mack gasoline or diesel engine

When it's 15° below and ice forms as the water hits, or whenever fire apparatus must face the extreme demands of fire fighting, that's the time to get the full measure of an apparatus' engine performance.

Does it start dependably . . . have the reserve power for the most grueling operations in any climate and terrain . . . pump hour after hour for as long as needed?

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This is the stamina that stems from Mack engineering know-how and Mack's many powerplant advances—Everlasting timing gears . . . Durafaced valve lifters . . . full-length water jackets . . . and gear-driven air compressor.

Select your next fire apparatus and the engine that powers it to meet the most demanding assignment you'll ever face, and you'll specify Mack fire-fighting equipment powered by one of the world-famous Thermodyne engines. Mack Fire Apparatus, Allentown, Pennsylvania. Mack Trucks of Canada, Ltd., Toronto, Ontario.

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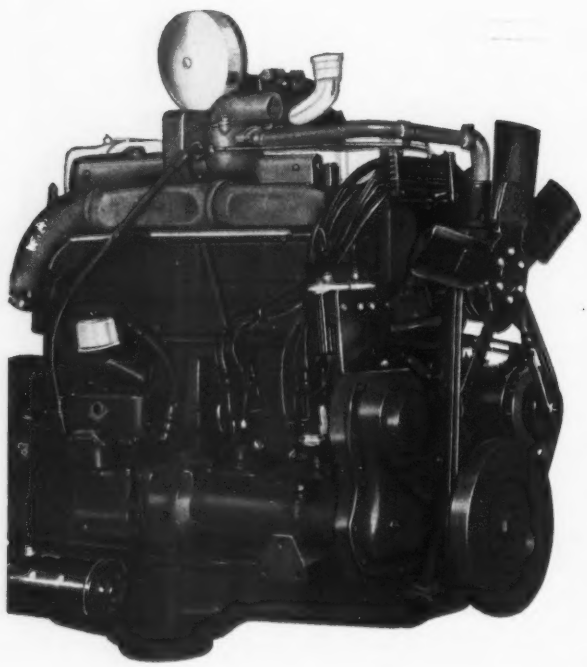
Mack offers three Thermodyne engines to best meet your requirements



Model ENF-707C Gasoline. Largest and most powerful of Mack-built Thermodyne fire apparatus engines, this 707 cu. in. powerplant develops 276 hp. High volumetric efficiency is achieved through opposite intake and exhaust porting and Mack's exclusive combustion chamber design.

Model ENF-540 Gasoline. For smaller apparatus and where the higher horsepower of the 707 cu. in. engine is not needed, Mack offers this 540 cu. in. engine which nevertheless delivers in excess of 200 hp at moderate rpm. It has all the design and engineering features that have made Thermodyne the first name for fire apparatus powerplants.

Model ENDT-673 Diesel. Already proved in millions of miles on the nation's highways, the famed Mack Thermodyne diesel engine is finding increased interest for fire apparatus where its many advantages make it the ideal powerplant. These advantages include: complete absence of an ignition system with its accompanying spark plug, breaker point and coil maintenance complications . . . fuel of lower flash point, hence a safer fuel . . . 24-volt electrical system for quicker, surer starts . . . high torque at low speeds . . . and, for departments where superior fuel economy is important, more work out of less fuel with a diesel engine. Developing 230 hp, the Turbocharged Thermodyne is finding new boosters among fire departments everywhere.

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DURA-FOG NOZZLE

TRY IT!

AT OUR EXPENSE

The Finest Nozzle in the Fire Service

It will deliver finer dispersion with less water . . . fights fire faster . . . every nozzle sold gets a 100% performance test . . . greater reach with a denser fog curtain . . .

POWHATAN

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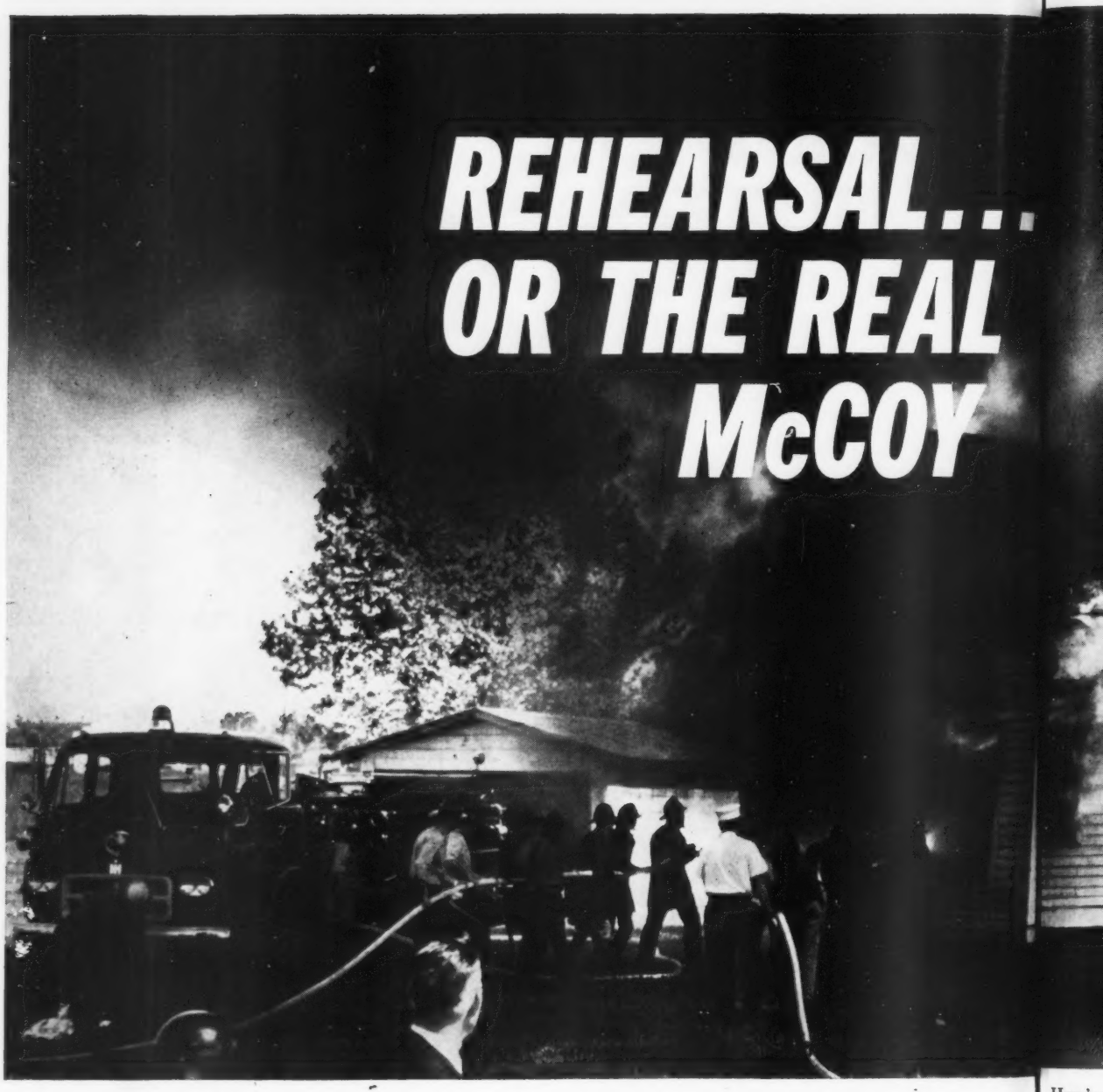
RANSON, WEST VIRGINIA



Your fire-fighting team will perform better with INTERNATIONAL Fire Truck Chassis—because they're custom engineered to give you a power-matched, capacity-matched rig to fit your exact needs.

Whether your department is in a city, village, farm or industrial area, you'll find an INTERNATIONAL Fire Truck Chassis that is *precisely matched* to your exact fire-fighting needs. You get dependable, *fire specialist* know-how in matching chassis to apparatus for the safety of your community.

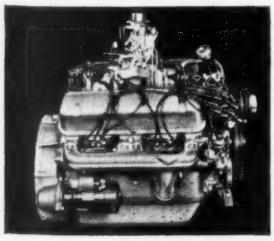
Your selection is made from the widest choice of basic models in the industry, with chassis ratings ranging all the way up to 33,000 lbs. GVW.

INTERNATIONAL also gives you a big choice of engine selections. Six powerful, economical V-8's and seven "Sixes" range from 154 all the way to 257 hp. LPG power is available. Pumping capacities go up to 1250 GPM.

INTERNATIONAL'S complete adaptability for optional equipment is well-known. Axles, engines and other chassis components are tailored to accommodate any tank, pumper, hose or other auxiliary equipment.

INTERNATIONAL keeps your equipment working too, with the world's largest network of truck dealers and branches for service and parts. See your International Dealer or Branch for full details. International Harvester Company, Chicago.

Here's the famous INTERNATIONAL Model VCO-196 going into action on a typical training problem. This tilt-cab model offers forward control for maximum maneuverability and front-vision for safe driving . . . as well as fast, easy engine accessibility for service. Your choice of 401, 461 and 549 cu. in. V-8 engines.



Two completely separate ignition systems guarantee sure-fire starts. INTERNATIONAL's famous dual-ignition on V-8 engines, for both the V-461 and V-549 sizes, insures life-saving, split-second starts. Both sets of plugs can be fired simultaneously or each set individually, by turning a switch. By-pass cooling and alternating valve system help insure long engine life. Contoured heavy dome piston and combustion chamber create high turbulence and even burning of fuel.

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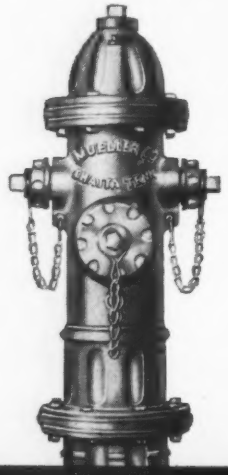
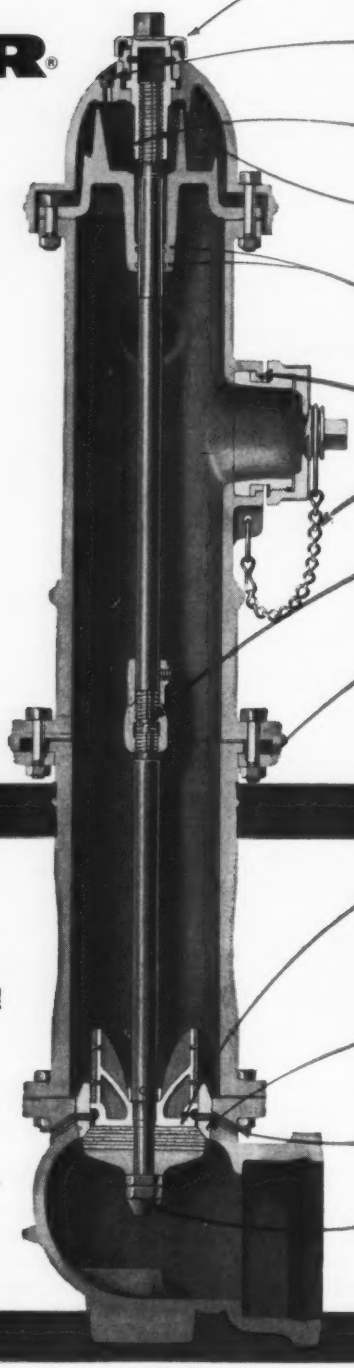
WORLD'S MOST COMPLETE LINE

MUELLER®

AWWA IMPROVED FIRE HYDRANTS





BRONZE WEATHER CAP—Keeps water away from operating nut and prevents tampering.

OIL FILLER PLUG—Check oil level quickly without removing bonnet.

OIL RESERVOIR—Automatically lubricates stem threads and bearing surfaces.

DRY TOP DESIGN—Threads and bearing surfaces are sealed from water.

"O" RING SEALS—Permanent, watertight, adjustment-free seal without binding.

BREECH-LOCKED NOZZLES—Interlocked and calked to prevent blow-out.

NON-KINKING CHAINS—Attached under each individual nozzle.

SAFETY STEM COUPLING—Breaks apart without bending the stem. Repaired in minutes without digging and with no loss of water.

SAFETY FLANGE—Separates cleanly on impact to prevent damage to barrel. Can be restored without shutting off water.

COMPRESSION-TYPE MAIN VALVE—Positively closed by water pressure. Of special wear and damage-resistant material. Permits repairs without shutting off water.

BRONZE SEAT RING—Straight threads, with copper-asbestos gasket, permits easy removal.

DOUBLE DRAIN VALVES—Empty barrel completely. Flushed with each use.

BRONZE CAP NUT—Locks stem and seals threads against corrosion.

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Once set, you can forget about a Mueller Improved Hydrant. With little or no attention, the Mueller Hydrant is ready for action in any weather.

Write for complete information and specifications.

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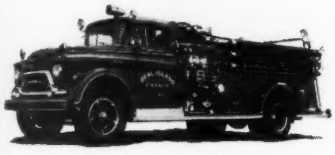
Now–more fire-fighting power than ever!

Yours with a Barton

SUPER-FOG GUN

Exclusive with American Fire Trucks

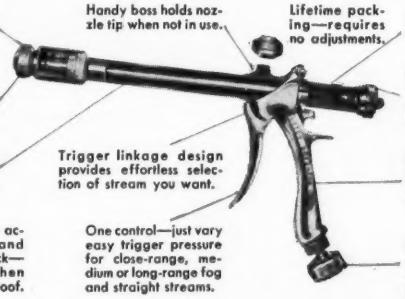


TWO BARTON SUPER-FOG GUNS are included as standard equipment on all American Fire Trucks—midship or front-mounted pump models.

For operating ease, superior power and quality, the Barton Super-Fog Gun rates *tops* with thousands of firemen. Now additional refinements give you even *more* convenience—*more* fire-fighting power than ever!

Study the excellence of every feature, every detail of this gun. Compare it to any other—and you'll see why users call it a "most valued accessory" on every American Fire Truck.

Only the Barton Super-Fog Gun has all these quality features!



- Removable nozzle tip conserves water. Large tip for volume when required.
- Handy boss holds nozzle tip when not in use.
- Lifetime packing—requires no adjustments.
- Stainless steel corrosion-resistant spring.
- Knurled knob adjusts—holds any stream desired. A slight turn open prevents freezing in cold weather.
- Non-restricted water passage with no slot to plug.
- All close-grained brass construction, heavily chrome plated for long life and use.
- Trigger linkage design provides effortless selection of stream you want.
- Palm-fitting pistol grip for comfortable, secure holding with one hand when climbing ladder.
- Non-pressurized valve action when opening and closing eliminates shock—a safety feature when working on ladder or roof.
- One control—just vary easy trigger pressure for close-range, medium or long-range fog and straight streams.
- Non-kinking swivel hose connection set on angle makes hose follow without strain on operator's hand.

Contact your American Representative soon! *Write for this new apparatus bulletin.*

AMERICAN FIRE APPARATUS CO.

American

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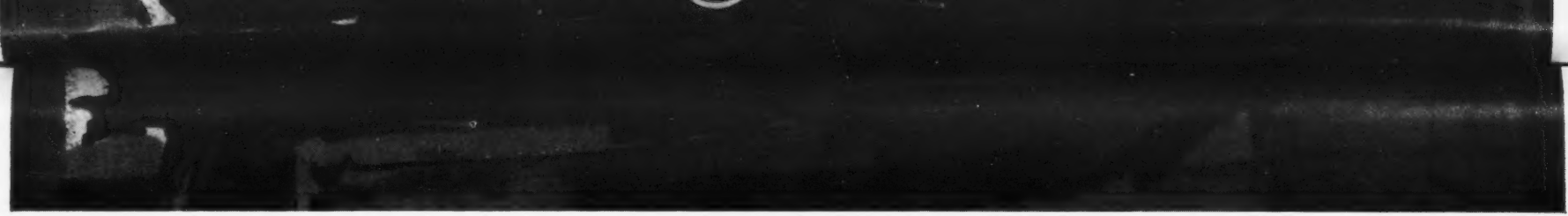
SPECTACULAR ADVANCEMENT!
AMBULANCE



NEW MILLER-METEOR GUARDIAN AMBULANCE

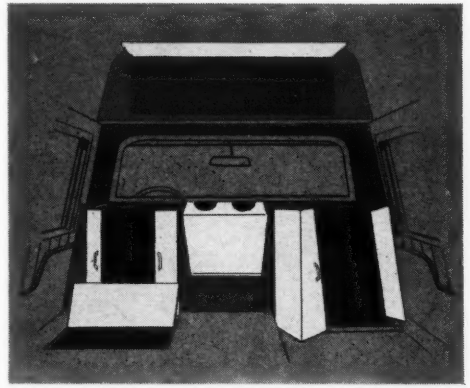
. . . YEARS AHEAD IN FUNCTIONAL DESIGN

Specially designed to meet the needs of fire departments, the distinctive new 1962 Miller-Meteor Guardian Ambulance, with chassis by Cadillac, provides unequalled life-saving efficiency and jet-age beauty.

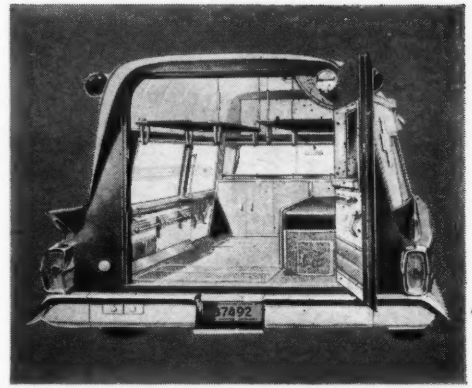
Interior working capacity, storage facilities, loading ease and provision for equipment installation are unmatched.

Rakish, slanted weather shield around rear keeps out rain, snow and wind when the door is open or the electrically operated rear window is lowered. Flashing light midway of roof side increases safety at crossings.

For full information, contact your Miller-Meteor Distributor or write direct to the factory.



Storage facilities are immense. Large door over partition gives access to biggest front storage compartment in any ambulance—10 cu. ft. of space over driver's area. The dispensary cabinet is also extra-large—20 cu. ft.—with abundant room for resuscitator, demand oxygen, medical supplies. Many other large compartments.

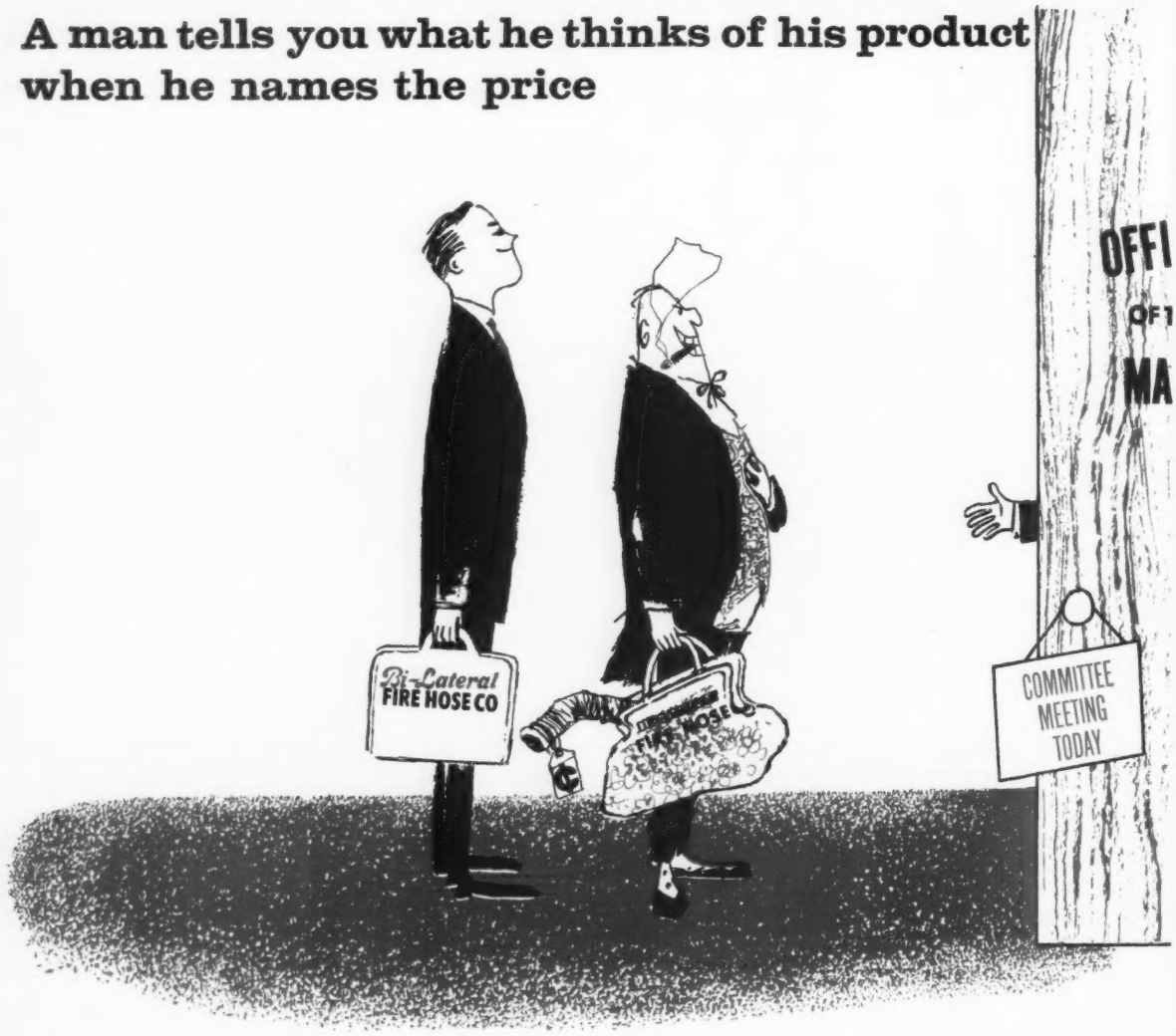


More head-to-foot comfort for patients on suspended cots, and more working space for attendants, result from the Guardian's 52″ headroom and unique roof lines that continue high and wide all the way back. Huge, vertical door for easiest loading. Reversible bunk. Adjustable built-in floodlight at rear.

MILLER-METEOR DIVISION • DIVCO-WAYNE CORPORATION, PIQUA, OHIO

WORLD'S LARGEST MANUFACTURER OF AMBULANCES WITH CHASSIS BY CADILLAC EXCLUSIVELY

A man tells you what he thinks of his product when he names the price



"... It is unwise to pay too much, but it's worse to pay too little ... When you pay too little, you sometimes lose everything ...

"There is hardly anything in the world that some man cannot make a little worse and sell a little cheaper, and the people who consider price only are that man's lawful prey."

—John Ruskin

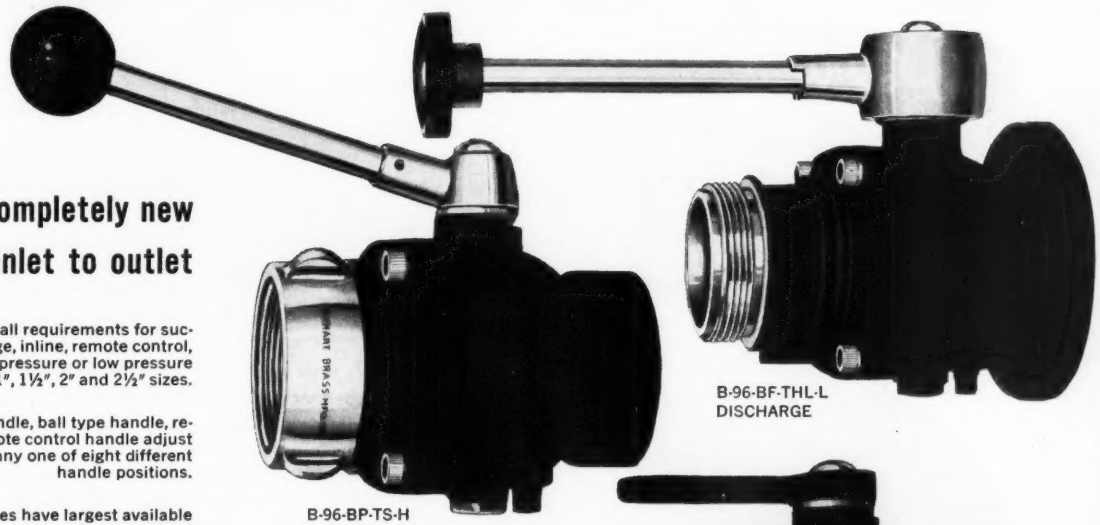
Bi-Lateral will *not* sacrifice quality to be low bidder. Fire Departments take pride in their equipment and in their efficiency record. Our *first* concern is to see that they get the proper, *reliable* tools to work with.

Your Bi-Lateral Representative will be very happy to explain to you how you save lives and money with Bi-Lateral Fire Hose—Bi-Lateral "Aquaseal" mildew protection; reinforced ends and point-of-fold reinforcement. He can also explain Bi-Lateral *Hose Record Cards ... proof* of Bi-Lateral's superiority.

Bi-Lateral®
FIRE HOSE COMPANY
20 North Wacker Drive • Chicago, Illinois

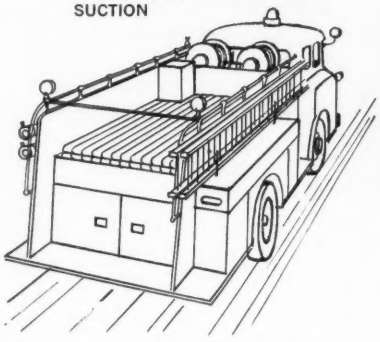
SPECIFY

ELKHART'S NEW BALL VALVES on your next apparatus



B-96-BF-THL-L
DISCHARGE

B-96-BP-TS-H
SUCTION



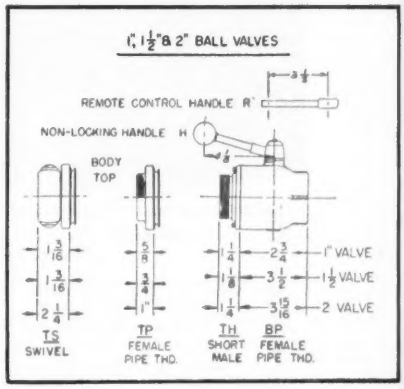
B-96-BP-TP-R
INLINE

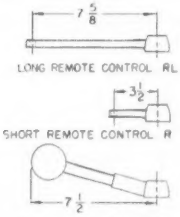
Completely new from inlet to outlet

- Meet all requirements for suction, discharge, inline, remote control, high pressure or low pressure valves in 1", 1½", 2" and 2½" sizes.
- Locking handle, ball type handle, remote control handle adjust quickly to any one of eight different handle positions.
- 2½" valves have largest available waterway of any standard apparatus valve.
- 1", 1½", 2" valves have full waterway throughout. (Full waterway through ball.)
- All 2½" valves have an exclusive, patented, adjustable ball seat. The only apparatus valve that can be adjusted without removing a single nut or bolt. Apparatus is never out of service.
- All 1", 1½" and 2" valves have an exclusive adjustable seat. Adjustment can be made without removing piping from apparatus.
- New design saves weight and space —valves are shorter and lighter. Check chart dimensions.
- Locking type, swivel joint, remote control operating unit available for all valves.
- New twist type locking handle locks valve securely in any position.

Refer to chart for your choice of inlets and outlets.

Now your apparatus can be 100% equipped with Elkhart Ball Valves. Completely new . . . completely re-designed. Development of these new valves came from experience gained through close contact with the Fire Service. *We urge you to write for complete specification folder.*





ELKHART BRASS MFG. CO., INC.
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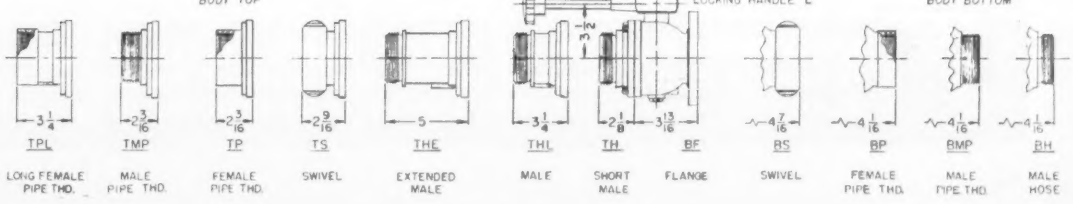
NOTE: BODY TOPS TPL, THE & THL, HAVE 3/4 DRAIN PLUGS



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The Original STRIPED SAFETY COAT

The striped safety coat for firemen is an Original Midwestern development — first in the field — a leader ever since its introduction 19 years ago.

The BRILLIANT YELLOW stripes are actually rubberized into the black rubber . . . an exclusive feature that defies comparison with substitute or imitation models where the stripes are glued, sewed or painted on the material.

When working under hazardous conditions in smoke, fog, dust or darkness, firemen deserve the superior quality, design, comfort and safety features offered by the Original Midwestern Safety Coat.

Many Fire Chiefs who insist on the best of protection for the men of their department specify MIDWESTERN SAFETY garments to the last man because every outstanding Midwestern feature is original. All fabrics are extremely soft and flexible and have the qualities to stay that way at varying temperatures. You can always distinguish a MIDWESTERN SAFETY garment by the soft feeling of the material in both rubber and fabric type garments.

We have always designed and constructed our garments with the one thought . . . that every fireman deserves complete protection in his hazardous work of protecting life and property against the ravages of fire.

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The many weights of both rubber coated and cloth type materials offered in our MIDWESTERN Quick-Hitch suit makes this combination ideal for all sections of the domestic market and export. Also, both coat and bunker pants may be purchased with or without detachable wool linings.

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Manufacturers of the Famous MACKINAW Safety Coat

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THIS HELMET BELONGS ON YOUR HEAD

Museum piece? Or modern-day head protection? Which one does your helmet most closely resemble?

With the brand new M-S-A® TOPGARD® Fireman's Helmet, there's no question about dependable head protection. It's virtually indestructible. You can bang away at it all day long with a ball peen hammer. But you can't make even the slightest dent.

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And for firefighters exposed to electrical contact, the M-S-A Topgard has extraordinary dielectric strength.

Perhaps you're already acquainted with MSA's unique doublecradle design: the Fixed-Crown Suspension. There's a permanently fixed upper cradle for tamper-proof safety, an easily adjustable lower cradle for comfort. No pressure points. No protrusions inside. Easy to replace. Easy to remove.

There's no splitting this strong new shell. No brim breakage. And unique uni-ridge styling deflects falling objects. Contrast this with multiple ridge helmets that tend to trap the force from falling objects.

This is the *only* helmet that truly dissipates energy without permanently deforming. Your MSA sales engineer or fire department distributor will be glad to demonstrate the M-S-A Topgard. And write us for new product bulletin.

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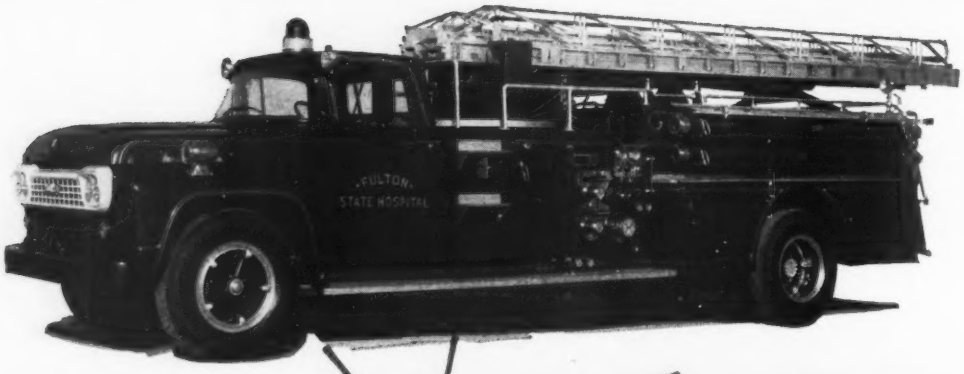

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BIG-CITY PROTECTION for the SMALL-CITY BUDGET

NOW — for the small city with aerial ladder requirements, the new HOWE Aerial Ladder.

Custom engineered to meet specific needs, and includes HOWE exclusive features.

- Optional mounting: back of cab or over rear axle to permit use of short wheelbase.
- 55', 65', 75', or 85' lengths.
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- Meets requirements of National Board of Fire Underwriters.
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View of 55' Ladder at Full Extension

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Chooses RCA "LD" Equipment for 4 Important Reasons

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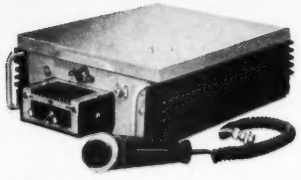
The Newark network is the largest major city transistorized system—275 RCA "LD" (Low Drain) 2-Way Radio Units. And the installation is important—it could well spark the opening of a new era of radio communications for municipalities. It insures not only the best operating system, but also the most economical in terms of initial cost and operating savings.

You get dependability and economy with the new RCA "LD" Transistorized 2-Way Radio. Ask your RCA representative; or send coupon for complete descriptive literature.



RADIO CORPORATION OF AMERICA
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☐ Please send me FREE literature on the new RCA Transistorized "LD" Mobile Radio.

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RCA
The Most Trusted Name in Radio
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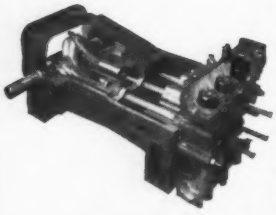
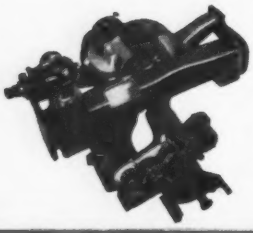
greater versatility





1 *HPV — BOTH HIGH-PRESSURE FOG AND VOLUME PUMPS — Operated separately or simultaneously, these two John Bean pumps are the heart of the HPV's dual fire-fighting systems. One is the original John Bean high-pressure pump, famous the world over for its rugged construction and dependable performance. For true high-pressure fog fire-fighting, the pump operates at 850 psi delivering 60 GPM through two hose lines. The other is John Bean's Class A centrifugal volume pump (N.B.F.U. tested), available in capacities of 500, 600, or 750 GPM.

2 IN-MOTION PUMPING — John Bean's in-motion pumping makes the HPV doubly effective in fighting brush, grass, and forest fires. High-pressure pump has its own power take-off coupled to the engine so that fog lines can be operated while truck is in motion. Control for engaging pump is located conveniently inside cab.

instant action always

3 DUAL BATTERY SYSTEM (OPTIONAL EQUIPMENT)

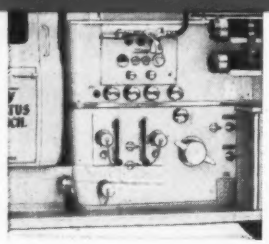
Assure instant starting with a dual battery system. Truck battery furnished on all HPV Fire fighters, extra battery is optional.

4 PUMP PRIMING — No time is lost in getting the John Bean volume pump into action. Gear shifting from "road" to "primer" has been eliminated. Primer control automatically opens and closes pump valve. The priming pump is of the positive displacement type and is used for *priming only*.

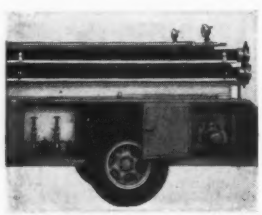
21 REASONS WHY

operating convenience

9 CENTRALIZED CONTROL PANEL — All gauges, valves, and controls are centralized on a single control panel for convenient operation. Panel is illuminated for quick, easy reading at night.



10 POWER REWIND HOSE REELS (OPTIONAL EQUIPMENT) — For faster, easier hose pickups, both high pressure hose reels may be equipped with optional powered rewind mechanisms. Hose reels with hand cranks are standard equipment.



11 AMPLE STORAGE SPACE — Four large-size, fully lighted compartments are built in to provide a total of more than 45 cu. ft. of storage space. One is tailored for slide-mounted generator equipment, another for portable water pump. Additional compartments offer ample storage for oxygen masks, nozzles, adapters, first aid, and other accessories. A small tool compartment is located conveniently above the rear platform.

12 INSIDE PUMP SHIFT — You save critical time and steps when arriving at a fire because John Bean's pump shift is located conveniently inside the cab.

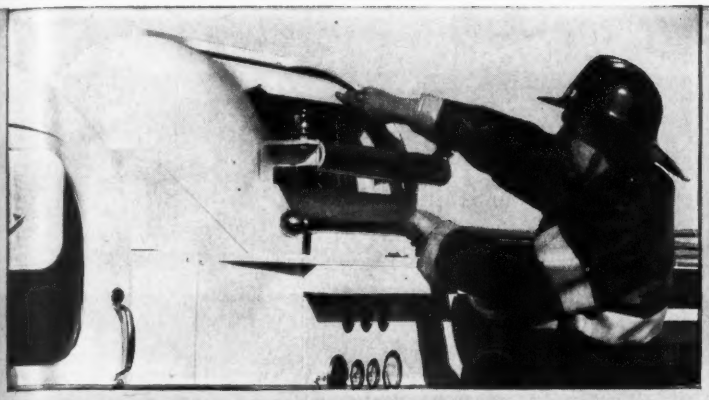
personnel safety

18 FULL-LENGTH GRAB RAILS — Chrome rails at convenient height extend full length of hose body and across rear, permitting firemen to don equipment safely while riding.

19 NON-SKID RUNNING BOARDS — Full-length side running boards are manufactured from approved non-skid treadplate, are securely mounted to the chassis frame.

20 EXTRA-WIDE REAR PLATFORM — Safety and comfort for riding firemen is assured by John Bean's extra-wide rear platform, constructed of approved non-skid treadplate.

21 FACTORY TRAINING by experienced fire fighters at John Bean is a part of the regular service that goes with every John Bean truck. Complete course teaches your personnel how equipment is best used and properly maintained.



5 WINTERIZED REEL COMPARTMENTS — To assure dependability in freezing weather, engine heat is channelled into enclosed reel compartments where it is retained by sliding metal covers. Engine heat is also used to warm pumps, valves, gauges, and controls.

rugged construction

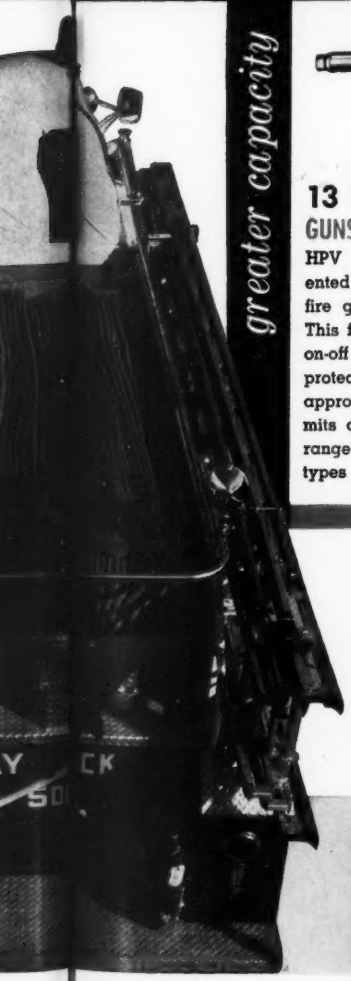
6 BALL-TYPE DISCHARGE GATES — Rugged, quick-acting ball-type gates will not leak under pressure or suction, turn easily at all operating pressures.

7 HEAVY, RUST-PROOFED TANK — 500-gallon, 10-gauge steel water tank is fully treated against rust to assure long life. Large, removable tank covers permit easy cleaning and inspection.

8 HIGH-STRENGTH PANELLING — All body panelling and compartments are made from special 12-gauge, stretcher level, body steel, completely reinforced with U-formed top for added strength and rigidity.

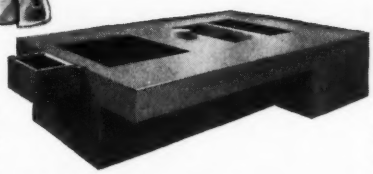
John BEAN HPV* FIREFIGHTERS

meet your fire-fighting needs like no other equipment can!



greater capacity

13 THREE HIGH-PRESSURE GUNS — Furnished with each HPV Firefighter are three patented John Bean high-pressure fire guns (third gun is spare). This famous gun features instant on-off trigger action with face-protecting spray for close fire approach. Rotating barrel permits quick selection of complete range of fog patterns for all types of fire.



14 500-GALLON TANK — Big 500-gallon tank supplies water for John Bean high-pressure fog lines. Fire-extinguishing value of water discharged as high-pressure fog is increased by a ten-to-one ratio — makes the 500 gallons go ten times further. Six-compartment baffling prevents undesirable water surge.

15 SPACIOUS HOSE BED — Smooth, level hose bed is properly ventilated . . . provides ample space for 1200 ft. of 2½-inch and 400 ft. of 1½-inch double-jacketed fire hose.

16 400 FT. OF HIGH-PRESSURE HOSE — Standard equipment with each HPV Firefighter includes two 200-foot reels of special high-pressure (5000 psi discharge) hose.

17 20 FT. OF SUCTION HOSE — Other standard equipment includes two 10-foot lengths of 4½ inch hard suction hose, complete with hydrant adapters and suction screens. Lengths of 2½ inch hard suction hose are optional.

John BEAN®

DIVISION OF FMC CORPORATION

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HOSE JACKETED 1

D 100% WITH DACRON®

POLYESTER FIBER

Needs No Drying... Can Be Put Away Wet!

Repack Wet. Hose jacketed 100% with "Dacron"* polyester fiber can be put away wet, because it's unaffected by moisture and mildew. Just wash it down after use, pack it on the truck, and you're ready to go again! It's never out of action on drying towers—so you can operate with less hose!

It's Tough. You can drag it through rubble—stomp on it—splash it with chemicals—soak it in water. This hose will *take it* and come back for more. In one test, hose jacketed 100% with "Dacron" was ready for immediate action after being dragged 8 miles on asphalt at 10 mph. A cotton hose was unusable after the same treatment for only 3 miles. So you can see how hose jacketed 100% with "Dacron" will cut your replacement costs to the core.

Ask your supplier for more information, or write: E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Dept., D. M. 16621, 3rd & Greenhill Avenues, Wilmington 98, Delaware.

*Du Pont's registered trademark for its polyester fiber.

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. . . *through Chemistry*

In Dallas they will tell you

O. D. Miller, Communications Supervisor for Dallas, Texas at the Gamewell switchboard.

New Gamewell System Operates with Jet Age Efficiency

The new Gamewell fire alarm switchboard in Dallas, Texas is one of the most modern in the nation. And as for efficiency, people in Dallas will tell you, "There's no comparison. There is little maintenance involved and the compact, efficient design of this switchboard requires very little room for installation."

In 1955 Dallas fire safety authorities voted against leasing telephone equipment and decided to retain and improve the city-owned coded systems. Bids were invited and Gamewell won over all other companies.

Dallas officials are especially pleased with the fact that the city's 696 box Gamewell system now includes 400 fire alarm boxes that operate over open lines. Because of this the system continues working when a wire is broken, by using the ground and remaining wire for transmission — that's Gamewell dependability.

Are your own fire safety authorities following Dallas' lead and taking positive steps toward reducing loss of life and property? Make it your business to be *sure*. Gamewell will be happy to assist you with your own fire safety problems.

Write for further facts to THE GAMEWELL COMPANY, 1256 Chestnut Street, Newton Upper Falls 64, Massachusetts. A Subsidiary of E. W. Bliss Company.

BLISS Gamewell®

FIRST... WHEN SECONDS COUNT

FIRE
ENGINEERING
THE JOURNAL OF THE FIRE PROTECTION PROFESSION SINCE 1877
VOL. 114, NO. 10 OCTOBER, 1961

Fire Prevention Is Worthwhile

With the celebration of the 39th Anniversary of Fire Prevention Week beginning October 8, the question of the effectiveness of such activities the year 'round is once again in the minds of many fire fighters. If the cold statistics of dollar losses are viewed by the skeptic without interpretation, it is possible that a negative opinion may be formed. However, students of this field are pretty much agreed that based on present-day dollar values and the tremendous increase in building activity to meet our needs the over-all losses are well in line with previous records over the years.

This may seem incongruous when viewed against reported 1960 record losses of $1,107,824,000, or the indication that current losses are running nearly 11 per cent above that total. If the present pace is maintained, the 1961 figure will reach the highest total in history and mark the fifth year in succession that our fire losses have exceeded the billion mark. When reviewing such totals, keep in mind that the great Chicago fire, which is commemorated by Fire Prevention Week, created a loss of $175,000,000. At the same time, note that statisticians point out that if this figure were translated into today's values the loss would reach well into the multibillions.

This situation may tend to confuse many since a logical person will question at once the contention that present-day inflation is the reason for excess losses. However, it is imperative to consider the following facts: More people live in this country today and they require more extensive and more expensive facilities which were undreamed of in the very recent past. The rapid expansion of this country since World War II is unprecedented and can be considered a population explosion.

Between 1890 and 1930 the population of the United States grew at the stable rate of about 12½ millions per decade. During the depression period of 1930 to 1940 the growth dropped off to about nine millions, at which point there were about 132 million people in the country. From 1940 to 1950 the population zoomed to 151 millions, an increase of nearly 20 millions. In the past 10 years nearly 30 millions more were added until our present population is about 180 millions. This means that in a space of 20 years our country grew at a rate nearly equal to that of the 50 years prior to World War II.

With the tremendous boom that followed to house the people and build the manufacturing facilities necessary to supply their needs, it seems inescapable that increased fires must result. It appears logical to expect such an occurrence since it is an age-old truism that people cause fires. Yet on the contrary, the statistics disclose that the total number of building fires over the past 10 years has not increased proportionally with the increase of building activity. The dollar value of these fires has risen, yet since 1950 the number of building fires per year have remained at or about the 400,000 level.

Perhaps the most important area which tends to prove this thesis is the matter of human lives lost by fire. Over the past 10 years, during which our population jumped by 20 per cent over previous census totals, the number of fire fatalities remained at a fairly constant average of 30 per day and totaled 11,350 during 1960. While it certainly isn't comforting to think in terms of the loss of even one life as an achievement, it is possible to state realistically that concentrated fire prevention efforts have paid off in this area. If this were not true, the death rate would have increased in proportion to the population growth rather than decline as the statistics indicate.

The record also shows that the greatest period of fire prevention activity occurred during the past 10 years. There may be many facets of this work which have been neglected or overlooked by our present methods, yet the facts tend to prove that what has been done up to date has been effective. This knowledge should spur the fire service on to even greater achievements in the future. If only one additional life or one extra building is saved from destruction by fire, it will be well worth the effort.

Alan O'Brien

House burns during height of Hollywood Hills fire—L.A.F.D. photo by Secor

L. A. City Fire Chief William Miller leaves KMPC helicopter outside command post at Griffith Park Observatory, following reconnaissance flight during Hollywood Hills fire

—L.A.F.D. photo by Secor

Los Angeles punished by raging brush fire

High winds fan fire into giant beacon, attracting spectators from miles around with resulting traffic jam

HOLLYWOOD'S worst brush fire since the disastrous Laurel Canyon blaze of two years ago, destroyed eight homes and damaged nine more in a fierce, windswept nightmare on May 12. Observers who watched the blaze sweep wildly into the tinder-dry hills and canyons were amazed that the fire did not destroy more homes in the heavily populated area. More than 1,200 acres of valuable watershed were burned over before containment was achieved late the following day.

The fire was reported at 7:43 p.m. at the rear of 3009 Beachwood Avenue in the Beachwood Canyon area just below the south slopes of the Hollywood Hills. Witnesses state it started when a high-tension wire snapped in the high winds, but L. A. City fire officials declined to list an official cause. The weather was hot and dry, with winds prevailing from west to northeast, varying from 15 to 35 miles an hour. Streets in the area are narrow and winding and many homes are built on the sides of hills.

On receipt of the telephone alarm, the central signal office at Westlake dispatched three engines, one truck, a squad and Battalion 5 Commander John Dick. First-in Engine 82 radioed for a second alarm at 7:47 and three additional engines. Division 2 responded, followed two minutes later by the Mountain Patrol's 1,000-gallon all-wheel-drive Tank Patrol 1. Chief Dick was in a distant corner of the battalion near Beverly Hills, but by the time he drew close to the scene of the fire he realized the severity of the blaze. "I heard Engine 82 radio for assistance," he recalled, "and as we drew closer I could see the clouds of smoke." At 7:59 he called for declaration of a major emergency condition, alerting the entire Los Angeles Fire Department for action.

As additional apparatus was ordered to the area, one of the biggest traffic jams in memory took place in the Hollywood area. Streets in this section are normally congested with Friday evening traffic and the blaze, visible for miles around, attracted sight-seers from everywhere. Many of the units responding after the initial alarms were delayed by the jams.

"I heard Engine 29, moving up to Engine 82's quarters on Bronson just below the fire area, report they couldn't get into the station because of the jam on the street," said Chief Dick.

"The Hollywood Freeway was like a parking lot an hour after the fire started when I arrived in the area," recalled Assistant Chief Henry Sawyer, the department's mountain fire fighting expert. Extra details of police and reserves were called for, and eventually some 200 peace officers were on duty clearing the area of traffic.

Incidents of bravery

Chief Dick observed many incidents of bravery by the firemen: "Our companies were faced with serious complications," he explained. "One rig could

By CLIFF DEKTAR

L. A. Fire Department engine company readies to go into action as flames flare in the tinder-dry hills during Hollywood Hills fire—L.A.F.D. photo

Contractors volunteer water truck at rear, squadron of motor police block off Hollywood Hills canyon road as fire races toward road —L.A.F.D. photo

block one of those narrow roads completely if it stopped to work on a burning house. Then no other apparatus could get by. In several instances company commanders by-passed burning homes to take houses farther up the street and left the roads open.

"We laid tap-ins off our bigger lines and tried to have at least one man at every house. I saw men driven back by showers of flames and then they would rush in with a hose line to douse the roof and walls. Our men never did a better job!"

Mobilization was now in high gear —by 8:49 p.m., 23 engines, five tanks, plus additional apparatus were already on the scene. Field commanders, observing the spread and dangerous potential of the blaze, requested assistance from the Los Angeles County Fire Department. The County responded at once and at 8:51 p.m., dispatched Engines 82, 74, 68 and 66 to report to City Station 82—all rigs were watershed companies.

Before the fire was contained, close to 500 men were on the lines. There were 41 L. A. Fire Department engines, plus 14 from Los Angeles County, 38 city tankers, eight miscellaneous units, two aerial trucks, one squad, one communication truck and two County camp crews. Twenty civil defense pumpers were dispatched, but none actually were used on the fire.

Chief Engineer William Miller and Administrative Deputy Don Hibbard were in command of the fire and several of the chief officers, including Chief Miller observed the fire from helicopters loaned by radio and TV stations.

"We normally don't think of the helicopter as being useful at night," said Chief Miller, "but it was so clear and so bright from the flames, our observation was very useful."

TV Station KTIA, incidentally, gave superb coverage of the fire from its "telecopter."

The fire was kept from crossing the ridge to the San Fernando Valley side of the mountains, but for a time did threaten the Civil Defense Control Center on Mt. Lee. Two shacks were destroyed at the center. The fire burned north and west and also furiously north and east through Bronson and Western Avenue Canyons and into Griffith Park. One hundred and forty-six girls from a Girl Scout camp in Bronson Canyon were evacuated.

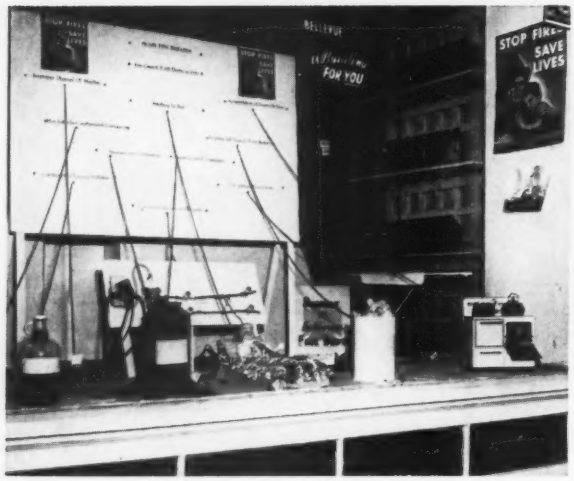
The fire licked around the Griffith Park Observatory and for a time threatened both the Greek Theatre and the famous bird sanctuary. There was a chance the fire could burn to the Griffith Park Zoo area, but despite some alarming press reports, the zoo was never in critical danger.

"We were fortunate in keeping the fire out of the exclusive Oaks area between Bronson and Western Canyons and out of the beautiful Fern Dell area of Griffith Park," said Chief Sawyer. "We had an old burn near Fern Dell and I put a bulldozer to work cutting a break and this saved the area."

A command post was established at the observatory and Chief Sawyer reported that accurate wind-measuring instruments there recorded blasts of wind up to 67 miles per hour.

After containment, two stubborn spots on the steep slopes of Mt. Lee eluded control. At the L. A. Fire Department's request, two U. S. Forest Service TBM air tankers from Chino were dispatched Saturday and after two passes each, the line was tied in —the aerial tankers being credited fully for this successful mopping-up operation.

Chief Sawyer was high in praise of the use of aerial equipment in this rugged area. Sawyer and other chiefs believe that the intensive watershed training which has been given all Los Angeles firemen in recent years aided immeasurably in preventing greater losses, particularly in the furious early stages of the fire. □□



This window display, set up by the Bellevue, Ohio, Fire Department during Fire Prevention Week in 1960, pinpoints home fire hazards—*Photo courtesy Fire Chief A. W. Boehler*

Assistant Chief J. L. Greer, Ellington Air Force Base, Texas, Fire Department gives pointers on extinguishers to Boy Scouts who visited the department during Fire Prevention Week

In Fire Prevention . . . . .

Don't entertain them —educate them!

By FRANK HANIFIN

HOW EFFECTIVE are parades, Miss Fire Fighter contests and visits from "Sparky" and "Smokey" in preventing fires? Fine—if they are followed up with specific fire prevention education. If the program stops with the hoopla, the citizens have been entertained, but they have learned nothing that will help them lessen fire hazards.

Dr. Earl S. Hannaford, safety engineer for American Telephone and Telegraph Co., recently suggested that plant safety program stand-bys as posters and pictures, statistical reports and charts and even the presentation of certificates and awards may not be as effective as experts once believed. In a survey by Southwestern Bell Telephone Co., some 3,000 workers said they felt such safety program factors as the provision of safe tools and equipment, periodic inspection and job training and instruction are more important.

The thought expressed by Dr. Hannaford may apply just as pertinently to fire prevention. To ask the general public to prevent fires seems like asking a church-goer to vote against sin. Except for the mentally unstable or the professional "torches," everyone wants to prevent fires. However, when a man is critically burned trying to remove a tree stump in his backyard with gasoline, or four children ranging in ages from four months to nine years are left at home alone and narrowly escape a raging fire in their apartment, it seems something more is needed than to caution, "Prevent Fires."

The Maryland Fire Brigades Association, Inc., for example, is doing that needed something more. The association annually conducts a one and one-half day fire prevention seminar, attended by representatives of industrial, mercantile, hospital, nursing home, and public and private school organizations in the Greater Baltimore area.

At a typical session, John T. O'Mailey, executive secretary of the Baltimore City Fire Department, thoroughly discussed the organization, training and maintenance of fire brigades. J. E. Jeffries, chief safety engineer for Esso Standard Oil Company, presented a program on "Safe Handling of Solvents and Liquefied Petroleum Gases." George Miles, safety engineer of the U. S. Atomic Energy Commission, spoke on "Radioactivity in Industry," and illustrated his talk with many examples of how radioactive materials are being handled safely and effectively in numerous industrial applications. The second day's program included a panel discussion of "Institution and Nursing Home Problems," led by Deputy Chief Frank J. Trenner of the Baltimore City Fire Department. Panelists included: Captain Charles T. Crowley of the Baltimore City Fire Prevention Bureau; Miss Sarah Hawkins, Maryland State Department of Health, and Fire Marshal Louis C. Maisel, of the Baltimore County Fire Prevention Bureau.

School officials learn

Fire schools for firemen are an old story in Kentucky, but fire schools for school people strike a new spark in the teaching business. The idea of teaching teachers—and principals, superintendents, board members and custodians—ways in which they can operate their schools so that fires get small chance to start is the job of Warren Southworth, chief inspector in the Division of Fire Prevention of the Kentucky Department of Public Safety. Since July, 1960, he has traveled more than 20,000 miles to visit school systems from Bardwell in the west to Hazard in the east.

Southworth and other inspectors of the division frequently find that

when a hazard is called to the attention of school people, they ask first, "Whose responsibility is it?" Safety is often called everybody's business. The practical result of this approach, valid as it is, has been that when the time comes for action, it is nobody's business.

Responsibility for safety in schools is spread wide, and Southworth tries to reach every group which is immediately concerned with this vital business. First responsibility rests with the fire inspectors of the division itself. It is their job to look and see—to find hazards and to bring them to the attention of school people.

Over-all responsibility, on the scene, belongs to the superintendent of the school system and to members of the board of education. Principals have the job of looking after their buildings, with the help of their teachers and custodians. Here, the program is aimed at the people who have the best opportunity to find and remove potential breeding grounds for fires.

It is up to principals to work out evacuation programs with their teachers. There have been instances, Southworth reports, when tragedies occurred because teachers were not aware of well-made evacuation plans. Every teacher needs to be familiar with the evacuation program and with the alarm system. To keep down confusion that can lead to panic, he suggests to teachers that they carry their roll books with them when they take their classes out of the building.

Custodians are important

Custodians need to see that all exit doors are unlocked whenever the school is occupied. To bring this point home, Southworth cites instances, familiar to anyone who has visited numbers of schools, where exit doors are kept padlocked. Custodians, too, can prevent fires by careful practices around the furnace rooms. Of the 27 school fires reported in Kentucky during 1960, one-third of them occurred in the early morning, in and around the furnace room. Most fires of this type occur from over-fired furnaces, and they break out about the time school takes up. One way to cut down on the chances of this type of fire is to inspect the heating equipment daily.

The second major cause of fires in Kentucky schools, according to the inspectors, is electricity. The blame here lies not with the power source itself, Southworth points out, but with its misuse. Modern uses of electricity in schools as well as homes are often unsuited to the wiring that was put in properly, according to standards of years past.

Fire Marshal Jack D. Holt, Lake Valley, Calif., F. P. District, with winners of essay contest on fire hazards eliminated from their homes

Chief William J. Taylor of Burbank, Calif., president of International Association of Fire Chiefs, left, presents plaque to Chief William L. Hilbish of Alameda, Calif., and Mayor William M. McCall for Alameda's home inspection program

Fire Chief Sidney F. Morse, Billings, Mont., left, accepts plaque commending his department's home inspection program from Jay W. Stevens, fire prevention director of the IAFC

Southworth puts on a convincing demonstration of how the misuse of electricity can start a fire in a building wall or ceiling. His mock-up of a building, complete with animated human figure, shows in a way that words never could, how the power of electricity demands respect from everyone.

Special problems, such as the use and storage of flammable liquids, come in for their share of attention, too. Several of the 172 persons who died in fires in Kentucky during 1960, lost their lives because they failed to recognize the danger in using such commonplace materials as hair spray, insecticide and finger-nail polish remover.

Extinguisher demonstration

Fire extinguishers, familiar devices hanging on their wall brackets in school corridors all over the state, but often baffling when the time comes to use them, are the subject of another demonstration that goes with the comprehensive program.

Results from the first few months of this new approach to school fire prevention are encouraging. The Pulaski County School system, where the first of the new programs was presented, was reinspected a few months later. The field inspector of the division found only half as many recommendations were needed as before the program was given. The program is available to any school system and to any PTA group in Kentucky which requests it.

The Minneapolis offices of the Hartford Fire Insurance Company Group provide another example of specific fire prevention education. The company's mimeographed fire safety program realistically faces the hazards and exposures to the building. It lists an evacuation committee for each floor and specifies the chairman of each floor committee. The general duties of the committeemen are spelled out in detail. The program includes exit drill instructions, detailed information on how to report a fire, and specific methods for evacuating each floor. Every employee receives a card which must be kept permanently in his desk. A floor plan, showing the exits to be used from the zones into which the

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FDNY squad during World War I consisted of volunteer auxiliary firemen who reported at 8 p.m. each day and were relieved at 6 a.m. Duties were "chore work of stretching and picking up, etc."

By CLARENCE E. MEEK
Honorary Deputy Chief, Librarian
New York Fire Department Library

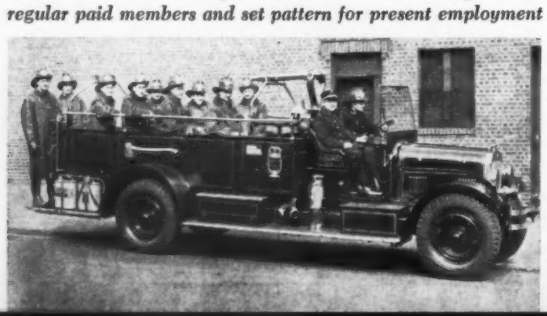
Chicago Squadron No. 3, 1916, equipped with White Apparatus and photographed in front of old Engine 48 quarters. Fire department continued use of units begun in 1913

Latest addition to present-day squad apparatus of Chicago Fire Department. One of 13 units in service, it carries officer and five or six men and mounts deck guns

Top: Interior seating arrangement of typical FDNY squad

Above: Recent apparatus placed in service for Squad 5, FDNY. A total of nine companies are presently on the department roster *—FDNY photo by Ray Hellriegel*

Below: World War II squad FDNY. Units were staffed with regular paid members and set pattern for present employment



THE LARGEST city to adopt the squad system in the pioneer days of platoons was Chicago, where three auxiliary squad companies of 12 men each were installed January 15, 1913, and where the utilization of squad personnel has since been developed to a greater degree than in any other city. Like Detroit's flying squadrons, the original Chicago squads were organized principally to quickly carry extra men to the fire ground to reinforce companies operating shorthanded. It was the adoption of the two-platoon system without an increase in the manual force sufficient to maintain minimum company strengths that caused Chief Charles F. Seyferlich to turn to the auxiliary squad plan.

Chicago extended the squad company service to the entire city between July of 1919 and February of 1920 by adding seven more units. Three additional squads have since been organized, to give a total of 13.

From Flying Squadrons to Squads—

The History of Fire Department Manpower Units—Continued

In developing the squad service the Chicago department enlarged the scope of the squads' operations and equipped and trained them for special-duty fire operations, as well as rescue work and public ambulance service in emergencies when the fire department's public ambulances are not able to cover all calls. A common sight at Chicago multiple-alarm fire scenes has long been the playing of heavy streams from the turret pipes which are a feature of the squad apparatus.

The New York Fire Department first used squad units as a partial solution to the critical manpower shortage problems of World Wars I and II. The first trial, in 1918, utilized members of the auxiliary corps to man a unit called the "Flying Squadron," located in the former quarters of Engine 40 at 153 West 68th Street, where auxiliary corps headquarters were established. Members of the regular force were assigned to drive the extra-size hose tender which was fitted up as a personnel carrier and which rolled with as many as 30 men aboard. The squad was assigned to respond to second alarms in Manhattan, and third alarms in the Bronx. It was discontinued in 1919.

When World War II again brought the potentially critical problem of shortage of fire fighters caused by the draft and the department's inability to recruit replacements, Commissioner Patrick Walsh and Assistant Chief-in-Command John J. McCarthy decided to install squad companies at strategic locations in Manhattan and Brooklyn. The first of these units, Auxiliary Squad Company 21, was organized October 28, 1943 at the quarters of Ladder Company 24, and equipped with a converted hose tender, and carried some minor fire fighting appliances. On November 30, the second of the auxiliary companies was organized in Brooklyn by converting Engine Company 204 to a squad unit, and about a month later Engine Company 20 in Manhattan was also reorganized as Auxiliary Squad Company 22. The quota for each of the squad companies was established at three lieutenants and 30 firemen, working the three platoon system.

The order organizing the New York auxiliary squad service of 1943 stated the function as: "The primary purpose of the squad companies will be to furnish added manpower whenever conditions at a fire, or other emergency, warrant; such as, for stretching and operating additional hose lines, assisting on hose lines, replenishing manpower affected at fires, for raising ladders, or for conditions where the need for additional men is imperative. Members of the squad companies shall not be detained at a fire or other emergency longer than necessary in fulfilling the purposes above mentioned. They shall not be held for overhauling operations after a fire is under control."

The three squad companies continued to operate until May 1945, when Engines 20 and 204 returned to their former status and Auxiliary Squad Company 21 was disbanded, the war emergency having ended.

One of the first projects undertaken by Commissioner Edward F. Cavanagh, Jr. on assuming management of FDNY in February 1954, was a study of heavily populated sections of the city where living and housing conditions caused a high incidence of fires and life loss, and often resulted in critical situations of a shortage of apparatus companies because of numerous simultaneous fires and fire emergencies.

These studies showed that the problem was one of districts being stripped of adequate protection by a number of one-alarm fires occurring at the same time, rather than concentration of apparatus companies at multiple-alarm fires when covering movements of locating units would be made by an established prearranged routine. The installation of a type of fire company which could be kept "mobile" for fast movement to any location where a critical situation existed, was explored as one solution to the problem.

The idea was adopted and the resulting squad companies are "flying squadrons" in the fullest meaning of the term, being used by commanding officers at fires in such ways as to fulfill the purposes for which they were organized — coverage of incidents where the response of regular engine and ladder services is delayed or inadequate because of a multiplicity of simultaneous calls, or other reasons. Squad company commanders are cautioned about the absolute requirement that their units not be "boxed in" or tied down in any way which might prevent their fast movement to other boxes or return to quarters, if not ordered to operate at the location to which they have responded.

That the basic concept of the value of squad companies, and the method of their use in meeting problems peculiar to fire fighting in parts of New York City, are sound, is attested by the expansion of the service since Squad Company 1 was organized April 16, 1955, and the development of squad practices along the lines originally laid down. Since the first unit was put in service in 1955, eight others have been established in areas requiring the concentrated attention of the department.

The standard equipment is enclosed-body-type apparatus having individual seats for the men alongside compartments storing the masks and other equipment provided for the specialized operations of the squad service. The squad companies are assigned only on first alarms to boxes in the defined areas, but may be special-called as needed.

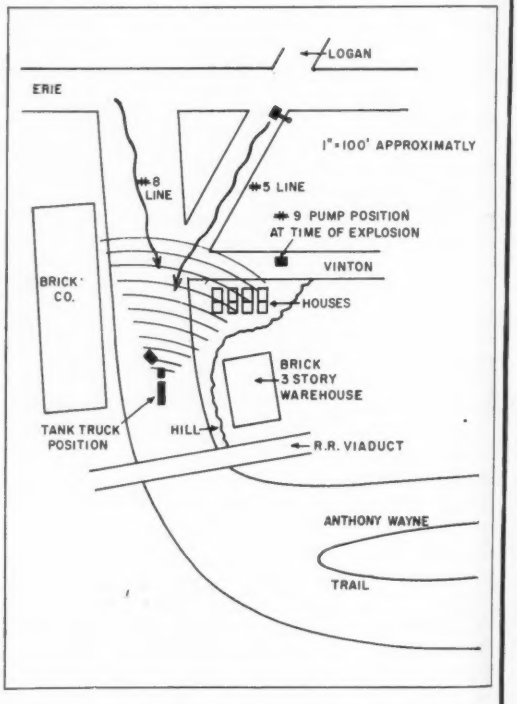
In addition to the nine squad companies, there are five rescue companies in the FDNY, but their functions are distinct from the duties of the other services, and do not fall into the classification covered by this article. There are many rescue squads in service around the country and their equipment and scope of operations is contemplated as the subject of a later article.

The Boston engine-squad companies are a distinctive type of fire service unit which more properly belong in a description of the rescue companies. They are really deserving of special treatment, and it is expected this will be done in the near future. □□

It is believed this photo was taken not more than two minutes before the explosion. Chief Bode at left (white shirt and cap) issues orders to unidentified men and lieutenant of Engine No. 8, as unidentified fireman stretches 2½-inch line into position. Uncharged line in foreground has just been stretched by Engine No. 5 —*All photos not otherwise credited are by the author*

Flames roar from standing semi-trailer following explosion. Lighting pole, trees, fence and houses on right are heavily involved by spread of flaming gasoline—*Wide World photo*

Four fire fighters die following Toledo gasoline blast



By ASHLEY GUNN

EXPLOSION of a gasoline tandem transport truck following a wreck and fire in Toledo, Ohio, on June 10, resulted in eventual death to four fire fighters and serious burns to six others, in addition to a police captain, a patrolman and 68 civilians. Of the civilians, 38 were children drawn to the scene of the original accident and fire.

The catastrophe occurred on Anthony Wayne Trail, a double highway of two lanes, each separated by a 30-foot median strip. Near the scene of the explosion the street starts a downgrade of 5 per cent for approximately 500 feet. The roadway then curves sharply to the right (east) and ends about 1,000 feet farther at Erie Street. As the road bends it goes under a railroad viaduct and becomes a single highway four lanes wide. At the top of the grade the posted speed is 25 mph. Road conditions were dry and normal at the time of the accident. The tank unit was proceeding north towards downtown Toledo.

Witnesses say the four-wheel trailer appeared to tip slowly onto its left side as the unit moved around the curve. As the trailer tipped, the hitch and brake hoses were snapped. This automatically set the brakes on the tractor and semitrailer. The trailer slid on its side to a position forward and to the left of the tractor. At some stage of this action the compartment separator plates in the four-wheel unit apparently gave way.

As the trailer unit slid on its side, spill occurred through the vents and was evidently ignited by friction generated heat and sparks. The leakage of gasoline from the overturned trailer continued until it drained down to the level of the vents, approximately half of the load.

Burning gasoline ran downgrade under the tractor and forward end of the semitrailer in a mass of flame from curb to curb. The heat generated by the burning spill caused the gasoline in the compartments of the semitrailer to boil out through the vents, adding to the intensity of the fire. Flames literally wrapped around the forward part of the semitrailer. This would indicate that the vent of the forward compartment was open at the time. The vent was permanently warped open by the intense heat.

At 10:56 a.m., Box 223 at the intersection of Logan and Erie Streets was pulled. This was followed closely by telephone reports of a truck fire on An-

Charred remains of hose line stretched by Engine Company 5 give mute evidence of catastrophe that struck with explosion. Fatally injured men were operating in this area

Wreckage of transport following control of the fire. End plate of semi-trailer (left) which was blown out is visible on remains of tractor. Upset trailer is at right

thony Wayne Trail near Vinton, about 400 feet from the location of the box.

The first-alarm assignment—Pumpers 5 and 8, Ladder 5, No. 1 Rescue Squad, and Deputy Chief Ewald Bode—was dispatched. Moments later the responding crews were notified by radio that a gasoline tank truck was involved.

Chief Bode, upon arrival, ordered a second alarm. This was logged at 11:00 a.m. Pumpers 9, 1, 2; Ladders 1 and 7; Rescue No. 6, and No. 6 District Chief were dispatched.

Pumper Company No. 9 was first of the second-alarm assignment on the scene. Their arrival time was approximately 11:03 a.m. They gave the following report:

"We had just pulled in when the whole thing blew. We saw the flames completely envelope from eight to twelve men. That would be No. 5 and 8 Companies." Other witnesses say that the men were human torches. Fire fighting was abandoned while firemen, police and spectators tore clothing off, beat out flames with their hands and otherwise attempted to extinguish the fire on the victims.

A third alarm was sounded at 11:08 a.m. and a recall issued for off-duty firemen. The "third" brought Pumpers 7, 6, 10, 3; Ladders 4 and 6; and Rescue No. 4 to the scene.

The explosion ignited four frame dwellings on Vinton which intersects with Anthony Wayne Trail just east of the scene. Three of these houses were heavily involved. Trees, utility poles, fences and grass were ablaze.

One spectator taking movies of the operation up to the time of the explosion, set his camera down in order to aid the victims and it was stolen. At a recent convention, the Ohio Fire Chiefs Association went on record as offering a reward for the return of the film but to date nothing has developed.

Most of the first-alarm assignment of fire fighters was knocked out of action. Seriously burned were Deputy Chief Bode, Captain Tom Alfieri, Privates Robert Harrison, Glenn Carter, Raul Henning, Ueckert Sperber, and Donald Riddle, all of Company No. 5; Lieutenant Taylor Perkins and Fireman Howard Anderson of Pumper 8 and Private William Genson of Rescue No. 1. One by one, over the next six weeks, Harrison, Carter, Genson and Chief Bode died as a result of the burns they had received.

Though critically injured, most of the men were conscious when they arrived at hospitals. Some of them walked into the emergency rooms. Fireman Robert Harrison said, "I'll try to stand while you cut my clothes off but I think I'm going to pass out, so hurry."

Deputy Chief Bode repeated, "She blew and there she was, just like that."

Later, Chief Arnold Papenhagen said, "We don't know why it happened. We fought that fire exactly according to approved methods and it blew up in our faces. Ten of my best men were badly burned, three of them are dead (this was before Chief Bode's death), some of them won't return to duty for months, some of them never."

Investigation under way

In a preliminary report, Chief Clarence Blanchard of the fire prevention bureau states:

Tractor was 1960 Model G. M. C. (diesel) Standard Oil Co. Unit No. 7621; Semi No. 1269, 1959 model, three compartments; first compartment—1,750 gallons capacity; second compartment—600 gallons capacity; third compartment—1,650 gallons capacity; total capacity, semitrailer—4,000 gallons.

The four-wheel trailer was a 1959 model, with three compartments. First compartment—1,750 gallons capacity; second compartment—600 gallons capacity; third compartment—1,550 gallons capacity. Total capacity four-wheel trailer—3,900 gallons. Total capacity both units, 7,900 gallons.

Units were carrying 2,850 gallons of high-test gasoline and 5,050 gallons of regular gasoline.

Vents, breathers and sections of the blown compartment have been sent to laboratories for examination. An examination of the tongue and hitch show definitely there was no fault. The hitch was broken as the trailer turned over.

Movies of the fire taken by local television stations were viewed in the hope that a clue might be shown. Many amateur photographers at the scene were contacted for pictures. One amateur photographer shot movies from a position on the opposite side of the railroad viaduct before, during and after the explosion. These gave an idea of the tremendous extent of the explosion, but the burning truck itself is not shown.

Chief Blanchard, who is heading the investigation, states that there is good evidence that the four-wheel trailer struck the left front corner of the semi's tank as it slid forward. It is believed possible that the combination of the damaged tank and the fact that the fire from the spill and the boil-over was so intense that the pressure could not be sufficiently relieved through the vent. This may have caused the failure of the front of the tank. The damaged area shows that failure caused a blowtorch action that

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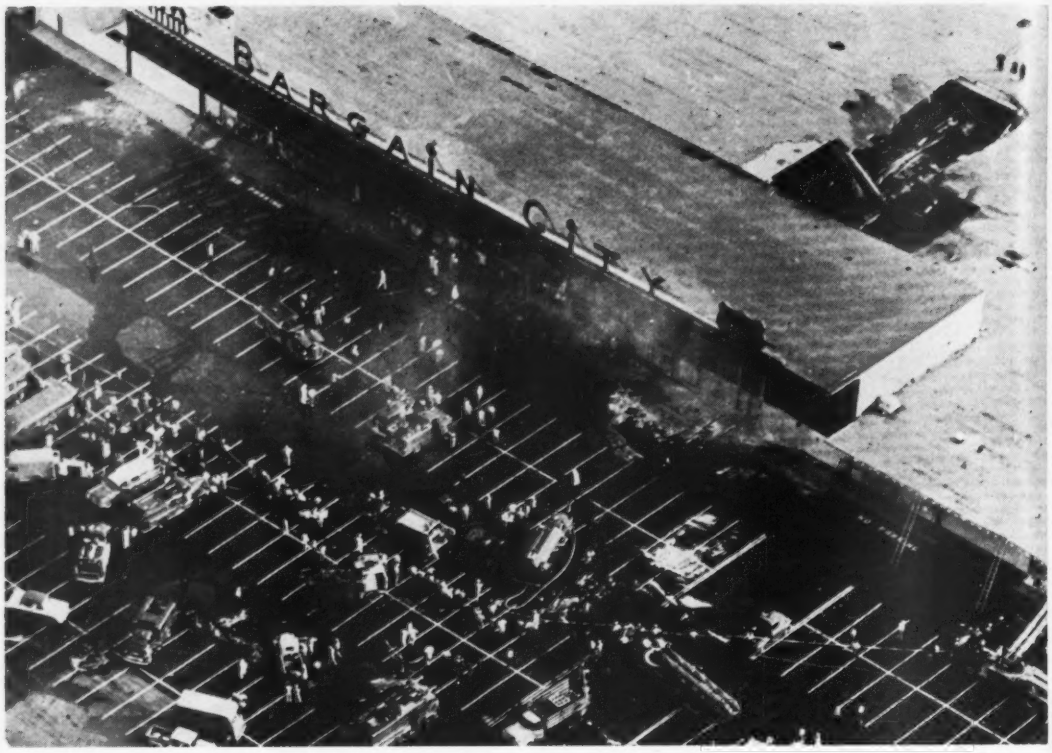

Fire followed crash of jet fighter into shopping center in Horsham Township, Pa., on August 27. Twenty fire companies quickly brought flames under control

▲ *Overhead utility services are usually at rear of supermarket. Here lineman cuts power cables as fire rages inside structure*

Modern shopping centers include variety stores among the occupancies. Business is carried on in same manner as supermarket with added hazard of concentrated combustible materials

—St. Petersburg Times photo

FIGHTING SUPERMARKET FIRES

continued

By CHIEF EMANUEL FRIED
Hinsdale, Ill., Fire Department

While great stress is placed upon the financial loss in these fires, little is said of a far more important factor. There exists a serious loss-of-life potential due to a number of conditions. Consider the exit facilities. Generally there is a pair of doors at one end of the store, although larger stores may have more. One door will be marked "entrance" and the other alongside marked "exit" or "out." As a rule the exit door will be automatic in operation, so that people leaving the store with packages do not have to touch it. The entrance door may be automatic or manual. The "exit" or "out" door opens in the direction of egress from the store as it should, but the "entrance" or "in" door opens inward. In many cases after entry a shopper

must pass through a turnstile which also is a one-way operation. Some stores may have one-way gates in lieu of the turnstile.

Operation of these automatic features is either by electric eye beam or treadle arrangement actuated by a person's weight. The method of actuating the doors is not important. What is important is what may happen in case of power failure with treadle-operated exit doors.

Such doors are opened automatically by air power which comes from a compressor powered by an electric motor and located in the utility area. If the electric power fails, the exit door may be pushed open manually. *But it becomes progressively more difficult each time it is opened and the air supply diminishes.* After about five openings, some of these doors require considerable effort to push open. Remember the door alongside is only for incoming shoppers. There may not even be a grasp handle on the face of the "in" door should someone try to open it from the inside.

Realize that shoppers, some with small children perched on the shopping carts loaded with packages, must be funneled through the narrow checkout aisles. These allow only one person to get through at a time so that the cashier actually controls the customer. It takes little imagination to picture what could happen in case of fire. People will rush to get out. The automatic door will not be of sufficient area to evacuate women in panic. If the door power fails and becomes difficult to operate, the shoppers will try the "in" door. All that is needed is for one woman to fall against the door and the rest will pile up in their attempt to get out. This will seal off the door effectively so that efforts to open it from the outside will be nearly impossible.

There may be other exits from the store, but usually they are not marked and require going through the utility section of the store which may be badly blocked. This is a far mare serious problem than most fire departments realize.

The major point to consider is the life hazard which is extreme to shoppers, severe to store help and to the fire department. Should fire get into the hanging ceiling, it may fan out rapidly overhead, unnoticed until it breaks through the ceiling in the main body of the store. This may trap shoppers and panic conditions will quickly prevail.

Fire may also break out of utility area through or above the flimsy partition which separates it from the main body of the store. Shoppers will be subjected to heavy smoke and heat conditions and the potential for a flash fire exists in the amounts and types of combustibles stored, plus hanging paper signs all over the store.

The time of the fire on a busy shopping day indicates peak load of shoppers. Parking lots are filled with cars which may block hydrants and impede apparatus maneuvers. Time indicates daylight with natural illumination regardless of failure of electricity. However, if this fire were to take place in the early evening hours and lights were to fail, the problem would be far more serious.

Construction, height and area are the same as under night fire conditions, except that all problems are magnified by the extreme life hazard.

Location and extent of fire may not be as severe because store is occupied. Discovery may be quicker, although store personnel may attempt to fight the fire and not alert shoppers. Fire may get away or into hanging ceiling without customers being aware of the danger.

If fire breaks out in rear of store, it will drive shoppers in panic towards the only exit they know. The front must be kept clear and available to get the people out. Advancing hose lines through these exits before the people have evacuated the premises may precipitate a tragedy. If a large body of fire exists, there will be little time to get the people out to prevent large loss of life. This will be far more of a problem if a hanging ceiling is involved. The shoppers must be protected by proper line placement with streams operated so that a protective curtain of water is placed between them and the fire.

Main attack on this fire should be from the rear and via roof using distributor nozzles. Rear service doors may be open or quickly forced, because bars will not normally be in place during the daytime. The rear streams should be directed at the ceiling over the fire area. This will act as a giant sprinkler and deflect over a larger area. It will also prevent driving the fire, smoke and heat toward the main part of the store where the shoppers are trying to get out.

Ventilation

Cut large hole in roof immediately over the fire area. Push down ceiling and open rear doors. This should pull the smoke and heat out through the roof and away from main body of store. There is less likelihood of a smoke explosion because conditions will not have had the build-up as under the night fire. Do not break out show windows. This may not be necessary, or lines may not be in position to cover in case fire flares up because of added draft.

All other factors remain the same. Due to the great number of occupants, it will be wise to call immediately for extra companies, medical aid, ambulances, set up emergency depot for treatment of injured, get extra supplies of blankets, etc.

Fire operations

The first truck company must get front doors open and chock them to insure they remain open, then proceed to ladder roof at rear, cut roof over fire area and force rear doors.

The second truck company must advance into the store (may need masks) to search for and remove people who are trapped or overcome. When necessary to get people out more rapidly, they should break out one show window at opposite front end to door. Large pieces of glass should be removed and the stock cleared from the inside of show window ledge before people are removed via this emergency means. Following this, the remaining show windows between the door and the emergency window exit should be removed for entrance and penetration of lines into body of store.

As soon as the first ladder company has completed its immediate assignment, they assist in search and removal of trapped people. If additional ladder companies respond, and people are still being removed, these companies are ordered to assist in the search and removal. Following this they search for extension of fire in the adjoining stores.

Normally a store will be evacuated in about three minutes. Under fire conditions and with people overcome, trapped, etc., the time of evacuation becomes problematical. It is for this reason that ladder companies are immediately assigned to get the people out. The potential of fire spread and exposure protection is subordinate to the need to protect life. Once the victims have been removed, then the emergency reverts back to a normal fire operation. The ladder companies pull ceilings, open side walls and do general overhauling operations.

Use should be made of loud hailers and/or public address systems to issue directions to trapped people and operating forces.

During early evening hours particular care in setting up large floodlights is needed. Often these are aimed directly towards the fire scene. This can be a serious error because powerful lights may blind people trying to get out, as well as firemen aiding

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Beware electrical hazards

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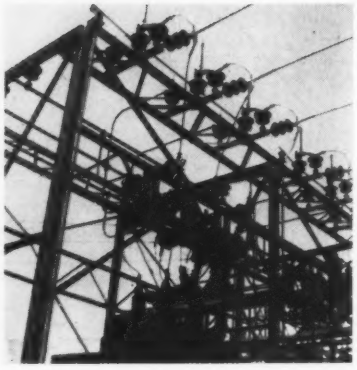
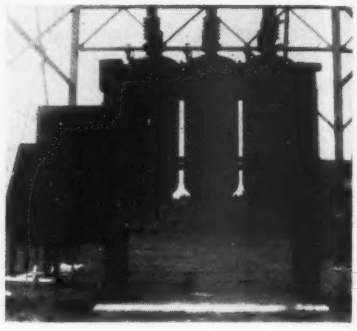


◀ *Air circuit breakers. Top breakers are open; breakers directly under them are closed*

33,000-volt oil circuit breaker. This will open when there is trouble on the line



By CHIEF JAMES M. CALLAWAY*
Myrtle Beach, S. C., Fire Department

If a conductor is down and the squadman knows that it is deenergized, he should respect the wire just as much as he would if he knew the line were hot. All primary circuits are supposed to have oil circuit breakers on them that automatically open or deenergize the circuit if there is trouble on it.

Precautionary steps

When a line crew goes to work on a damaged circuit they take two precautionary steps: First they "put air in the line." That is, they open a switch other than the oil circuit breaker so that as much as 3 feet of air is between the line and load side of the switch depending on the voltages involved. A cardinal rule for linemen is: "Never work behind an oil circuit breaker." An oil breaker is a spring-loaded automatic switch, and even though it is supposed to "lock out," malfunctions can and do occur and the switch just might reclose itself.

Secondly, the line crew will ground all the circuits on the line side of the break. A fireman cannot "put air into a line," neither does he have the equipment to ground a line, so these two items alone are enough to make him stay clear of conductors on the ground.

It is necessary to know a little about power company procedures in locating and clearing a "locked out" circuit to understand the most important reason to stay clear of broken primary lines. If a lineman knows where and what the trouble is he will open air break switches and ground the lines immediately.

However, in about 95 per cent of his trouble calls, the only information he receives is that a certain substation or circuit is out. The first thing he does is to go to the oil circuit breaker, reset the switch and close the breaker. He is supposed to switch the breaker to manual operation which only allows the breaker to relay one time. There are indicators on the larger breakers which will show him what to look for, if there is still trouble on the line.

In about 25 per cent of the cases the breaker will hold, because some line trouble will clear itself, such as a limb falling across the line, or perhaps a fused tap line that has grounded or shorted conductors. If the oil circuit breaker is not set on "manual" and left on "automatic," when a lineman trips it on, the breaker will relay or turn itself on three times before it locks out. The first relay will be instantaneous, the second in about a minute, the third in about two minutes later. Either one of these "shots" of electric current is enough to be fatal. Just remember that even though a conductor is deenergized when you arrive on the scene, there is a very strong possibility that it will not stay deenergized.

Another important factor to remember is that every conductive object that a live wire touches becomes a hot conductor. This could be an automobile, a fence, wet ground or pavement, guy wires, telephone lines, poles themselves and probably most important to us as rescue workers—people or animals. We have to disengage people from live conductors, but in far more instances we will need to recognize foreign conductors, or conductors other than the actual wires, and take the necessary precautions to keep ourselves and others away from these seemingly innocent hazards.

Emergencies involving vehicles

If live conductors touch a vehicle, the vehicle becomes a conductor. If the vehicle is upright the rubber tires act as an insulator, energizing the vehicle. Any person coming in contact with the vehicle while standing on the ground will, with his body, give the current a path from the energized vehicle to ground. This flow of electric current through the body can and often does prove fatal.

If the occupants of the vehicle remain inside, they are relatively safe from electric shock. When the victims are rational, and conditions permit, tell them to stay in the car. If, because of fire or injury, it is imperative to remove them at once, remember that as long as a person does not come in contact with both the conductor and the ground at the same time he is relatively safe.

If people inside of the vehicle can understand and carry out instructions, tell them to *jump off*, not step off. By the same principal, if squadmen get into a similar situation, they, too, should jump off, making sure that both hands and feet are clear of the vehicle before coming into contact with the ground.

Ground conductivity

It is impossible to give a set rule on how to approach an energized vehicle or conductor. The ground around a conductor is also energized. The amount of current and the size of the area are dependent upon the conduc-

Continued on page 930

*The author has had many years experience as foreman of an electric company line crew, and as an electrical contractor. All the material included here is condensed from the electrical section, South Carolina Rescue Squad Manual.

A new approach . . . . . .

The subtle fire prevention message

By S. EUGENE BARBER
Assistant Chief
Phoenix Fire Department

HAVING TROUBLE getting your fire prevention messages into print? And when you do, are you experiencing difficulty in getting the public to read them? If your answer is yes, then move over, brother, you've got plenty of company.

This is the age of the "hard sell." Our poor public is pressured from every source to buy more and better mousetraps. So you already own a house full. Add on another room and fill it, too! Sex, sirens, and syrup go into these sales pitches to separate us from the hard-earned buck. Scientists conduct costly research to evaluate our sales resistance and devise new ways to breach the bastions of our no-power. College professors while away weary hours inside the hallowed, ivy-covered walls of old P. U., grinding out graduates who are dedicated to this same end. They pop out every spring confidently clutching a duly inscribed goat hide in their eager grasp which certifies that they have then and there become "sales psychologists, marketing economists, sales analysts" or some such title which is wont to suggest the epitome of lofty, erudite accomplishment. These graduates are then pitched into the miserable maelstrom of marketing procedure the world over. Using the goat hide from old P. U. in much the same manner as the average American hunter would an unlimited license to take game on the Sarangetti Plains of Africa, they level their big guns of salesmanship upon the public and blast away. So, we have the "hard sell."

The fire service feels the results of this type of sales campaign. With mounting fire losses year after year, budget problems, manpower problems, and other plain old problems, the average fire chief is hard pressed to come up with any kind of an objective attitude toward a publicity program to sell fire prevention. After all how can he even begin to compete for public attention against such pros as the scientific grads from old P. U.? To even make a brave start would require a budget about as fantastic as one designed for rocket research. The city fathers would need emergency treatment for smoke inhalation after they got through scorching the poor old chief's carcass if he had the temerity to even as much as broach the subject.

So what do we do? Shall we let our cities and towns continue to burn down around our befuddled heads? Or shall we go on our merry way grinding out such hackneyed phrases as "Dear Public, don't do this or your house will burn down; Beware lest your factory fall in flames; Take heed else your business burst into blazes"! All good messages, but who reads them? More than that, who prints them?

I wonder how many good, public-spirited editors wince every time the chief shows up with a handful of this type of copy? More than we'd care to admit.

Value of newspapers

Newspapers are one of our best allies in presenting the fire prevention message. Every day, every week, every month all year long these papers are going into homes. The reader naturally opens it to his first point of interest. This of course may be a racy tidbit concerning the trial of some shapely doll accused of the long overdue demise of her faithless paramour. Or the reader may prefer a particular by-line story. Then there is always the intellectual who prefers the initial stimulus of Little Ragged Rannie in the comics. But be this as it may, once the reading eye has perused its first prize, then it moves on to the second most interesting point, etc. Once the eye catches an interesting line or phrase, it pauses to read the opening paragraph. If this is intriguing enough, the reader is usually hooked for the balance of the story.

Newsprint costs money. It takes a fair bundle of bills just to buy it, and a whole lot more to get it on the street with your copy on it. Publishers have to make a living no matter how public-spirited they are. They can accept only just so many, "don't burn down the barn" messages and no more. According to the dictates of dollars and cents there just isn't room for them.

But don't give up. There is a way.

Take a tip from the writer's favorite editor, Turk Smith of the *Arizona Republic* in Phoenix. Turk is the sneaky type. He puts it this way, "As long as your information is in news form or otherwise has reader appeal, we will take everything you can give us." And he does. Rarely a week passes that the Phoenix Fire Department doesn't have a by-line feature in the big Sunday edition of the state's largest daily newspaper. This story reaches some 250,000 Arizona homes. When we do miss an issue it was only because we didn't make the deadline.

Keep it "sneaky"

Now the problem is how do you keep a fire prevention message "sneaky," as Turk says. It isn't too difficult once a formula has been established. The one we've been using in Phoenix is to pick a subject with reader interest. Stoves for instance—the old, sentimental, pot-bellied stove of yesterday, the depot stove, the stoves of yesteryear which are now collectors' items in antique stores—these are of interest to readers. The modern heating unit by comparison is a mechanical marvel, but also presents complicated problems of fire, explosion and asphyxiation not experienced in the "good old days" of its pot-bellied predecessor. The general discussion of stoves leads into these and the reader is always left with a fire prevention message concerning the heating problems of the home.

Home gasoline storage is a particular problem in the Phoenix area. The

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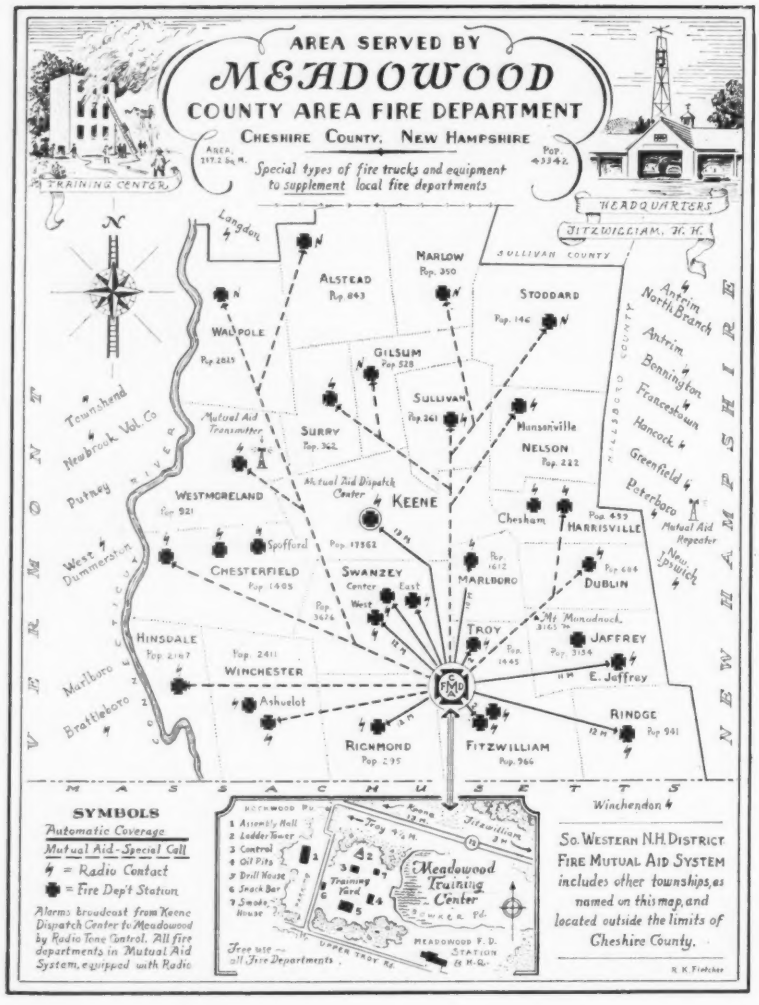


Meadowood County Area Fire Department provides unique service

IN RURAL AREAS, the county or county-area-type fire department can furnish a highly desirable prior step in cooperative fire fighting, without waiting for the more customary mutual aid response. This is the firm belief of Chief Donald Holbrook, founder and chief of the Meadowood County Area Fire Department. Chief Holbrook boasts that Meadowood provides this unusual service to a 10-town area of Cheshire County, N. H.

A county or county-area fire department is not a municipal or town department but rather one centrally located in a larger territory and designed to serve many towns in the county on first call. Meadowood's superiority to the more usual mutual aid response is attributed to "automatic response," which requires that departments using Meadowood's services, promptly report building fires to the Mutual Aid Dispatch Center in Keene. The Meadowood fire fighters are alerted by the dispatch center either by tone control radio receivers in their homes and places of business or by a red network telephone system. They respond as nearly simultaneously with local equipment as possible. If it develops that Meadowood's specialized equipment is not needed, on long runs it can be turned back halfway or less to the fire.

Special equipment

Meadowood purposely has acquired apparatus and equipment which are not found in any other fire department in its area, but which are essential to more efficiently combat a fire along modern lines. Among these is an all-wheel-drive squad car, which carries an air compressor capable of filling air bottles for masks in a matter of minutes. It is equipped with two stretchers, and usually responds with a trained nurse aboard. Its two radios on both high and low frequency provide an ideal mobile communications center, and it also has public address facilities.

The New Hampshire department also has an all-wheel drive rescue truck completely equipped with forcible entry tools, acetylene cutting equipment, lighting plant and medical supplies. Chief Holbrook boasts that there is no other truck like this in Cheshire County.

Another apparatus which is unique in the county is Meadowood's all-wheel drive 1,500-gallon tanker. Even where hydrants are available, this truck has immediate uses at building fires of more than the smallest degree. Where hydrants are not available, the truck is invaluable regardless of the smaller tanks which may be available in a local fire department.

The 65-foot aerial ladder and pumper with supporting equipment, including a life net and a ladder tip deluge nozzle, is the only aerial in the area outside of Keene.

Meadowood's new chief's car brings a trained senior officer to handle Meadowood men and equipment, working under and with the local fire chief. All Meadowood senior officers have attended the famous fire school of the New Haven Fire Department.

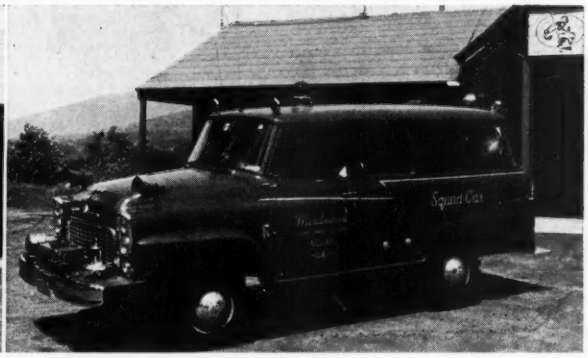
How it came about

The Meadowood County Area Fire Department was organized by Chief Holbrook as a New Hampshire non-profit corporation in November 1953. This was made possible by the enthusiastic cooperation of his neighbors in the Bowkerville area of Fitzwilliam. Its headquarters are strategically located in almost the geographic center of the 10-town area which it can serve most efficiently. It offers the services

Chief Donald Holbrook, founder and head of the Meadowood County Area Fire Department with the new chief's car

Meadowood's "quint," combination ladder-pumper, is the only aerial in the area outside of Keene

With all-wheel drive, this 1,500-gallon tanker-pumper can respond in practically every type terrain



A trained nurse usually responds with the squad car which is a multi-purpose ambulance-first aid unit

Meadowood's training center gives fire fighters from all of New Hampshire the chance to train by fighting actual fires

The well-equipped rescue truck is valuable at even minor fires because of the added protection its equipment affords firemen

of its specialized fire and rescue equipment free of charge to neighboring towns. Its volunteer members receive no compensation for their services, and the department receives no aid, tax or otherwise, from governmental sources such as town, county or state.

The women's auxiliary and the members work hard to raise money to help support the maintenance of their assembly hall and an accident insurance program. The cost of maintaining and operating the department, however, as well as the capital expenses for its equipment, have been provided by one sponsor. More than $160,000 has been spent to make Meadowood the most modern and efficient rural fire service that careful study and broad knowledge can bring about. Average operating and maintenance expenses for the department run about $5,000 a year.

Broad knowledge and careful study

Chief Holbrook's broad knowledge of the fire service is based on more than 30 years study of fire fighting throughout the United States and abroad. Yet he has not been a spectator on the sidelines, idly studying the theory of fire fighting. For some 10 years prior to World War II, he responded to fires—as a volunteer—with the Newton, Mass., Fire Department; fought fires along with the firemen and later served as civilian aide to the chief of the Newton Fire Department. During World War II, he saw service with the Army Air Corps as a major in charge of fire prevention and fire protection in the Midwestern Procurement District.

During his tour of military service, Chief Holbrook came to know well the many city fire departments in the district, and for the first time he met and studied volunteer fire departments and gained a respect for and interest in

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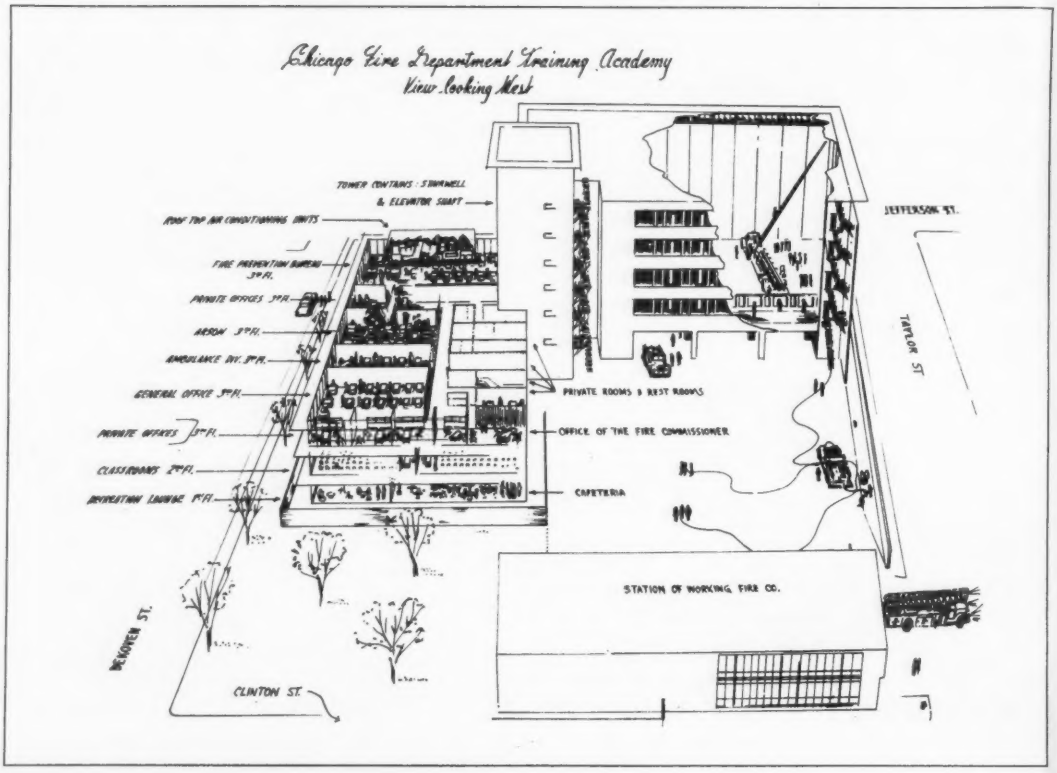
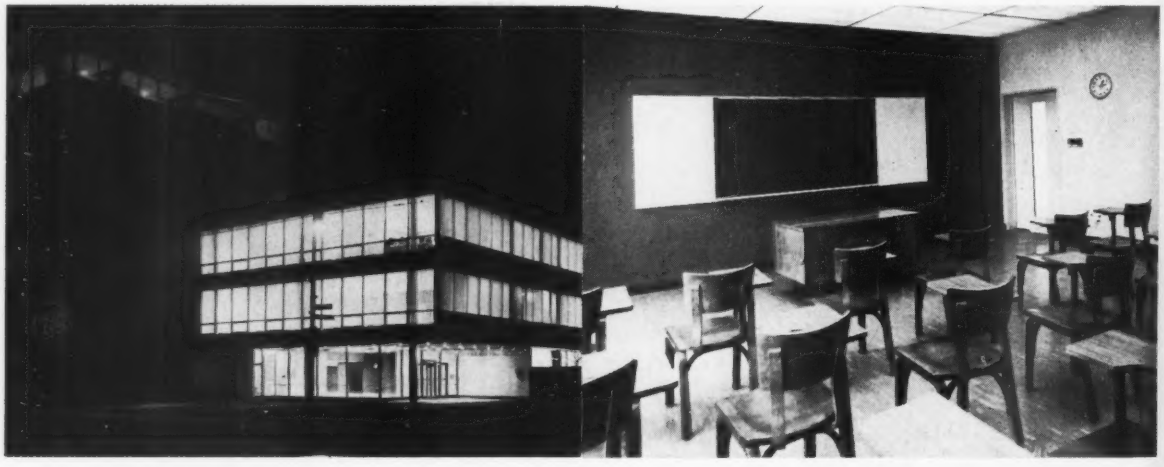
NEW CHICAGO FIRE TRAINING

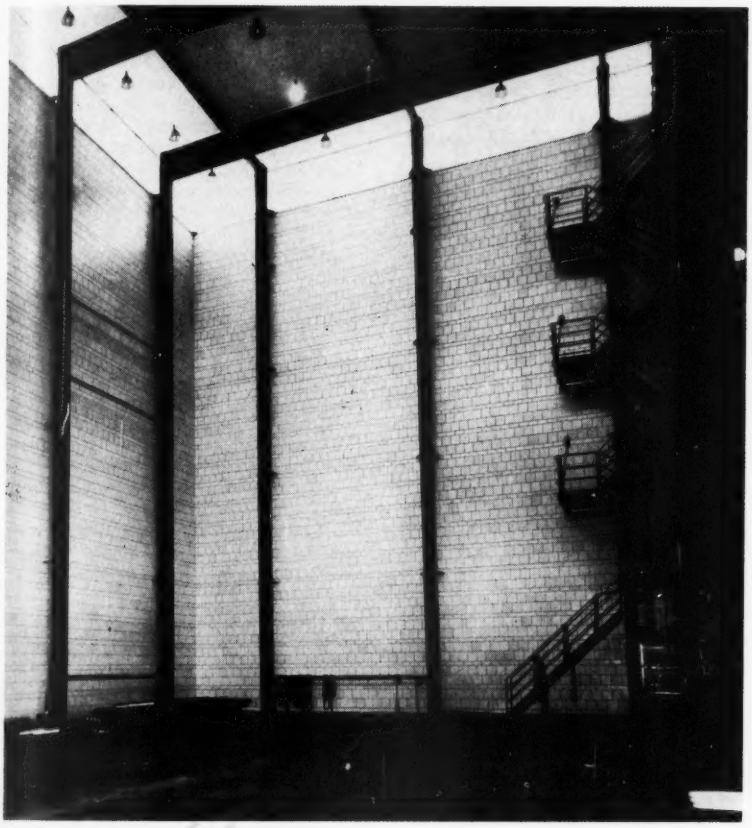




Above left: Administration building and drill tower make a beautiful sight at night. Department heliport is on roof directly above lighted portion of tower Above right: A classroom, one of seven in the administration building Right: Office of the fire prevention bureau is typical of the staff facilities included in the administration building

—All photos Official Chicago F. D.

AND ADMINISTRATION CENTER



By NEAL CALLAHAN
Chicago Fire Department

CHICAGO officially dedicated its new $2-million fire training and administration center on May 15, 1961, before many of the United States' and Canada's leading fire chiefs.

Composed of three buildings, it covers a complete city block, including a five-story drill tower, a three-story administration building and a large fire station housing an engine company and a snorkel unit. It was just 90 years ago, on the same site, as the story has it, that a cow kicked over a lantern in the barn of the O'Leary residence and the Great Chicago Fire of 1871 began.

The drill tower, flaming red in color, is 100 feet long and 62 feet wide, and is built to permit inside drills with any piece of fire equipment. The east wall is fitted with various sizes and shapes of windows so candidates may train on all types of window conditions.

Also included are a sprinkler room, a smoke room and a gas chamber. The tower is equipped with hydrants, straight fire escapes, cisterns and standpipes. All facilities of the drill tower are duplicated, with those on the inside for use during inclement weather, and one on the outside for drilling in good weather.

The administration building is a modern office building with complete room-to-room communications. Completely air-conditioned, it is made up almost entirely of glass exterior walls with marble in the main lobby. An elevator runs between the administration building and the drill tower direct to a heliport on the roof of the tower. The first floor features a cafeteria, library, recreation area, patio and an information desk. The second floor is made up primarily of classrooms. All have portable walls which permit arrangement into a number of small classrooms, or several larger rooms. Included on the second floor are the offices of the drillmaster and his assistants.

The top floor includes Commissioner Robert J. Quinn's office, the offices of Chief Fire Marshal Raymond J. Daley, First Deputy Fire Marshal Frank A. Thielmann and the seven deputy fire marshals. Also included are offices of the fire prevention bureau and the bureau of fire investigations. Living quarters for visiting fire officials are provided on this floor. □□

Above: Interior of the drill tower shows one of the two fire escapes inside. Included are two fire hydrants, a sprinkler room and a set of windows similar to those on the outside
Left: Exterior view of tower includes fire escapes of various types. Windows, typical of those in area, are set in frames on fourth and fifth floors
Below: Commissioner Quinn lands helicopter on roof of the drill tower. Because of the commissioner's program of using helicopters, the heliport was added to the facilities

BEWARE ELECTRICAL HAZARDS . . . *Continued from page 924*

tivity of the earth or pavement, which is determined by moisture and chemical content.

It is possible to receive a good shock by walking up to a grounded conductor. This happens when the legs and hips give the electric current a path of less resistance to pass through, than does the ground over which the person is walking. The wetness of the earth or pavement would probably be the more important factor in determining how close you can approach a grounded conductor. Always approach slowly with short step. Usually you will feel a small stinging or shocking sensation on the soles of your feet before you get close enough to get into serious difficulty.

Handling energized wires

When all other means of saving life have been expended, and it is necessary to move a person from a conductor of electricity, a fireman should have some idea about how to protect himself and others involved in the rescue. The handling of any conductor is a last resort. The term "any" is used because you should assume that "all" conductors are energized.

There are many instances when the risks involved in rescue are not justifiable. For example, if a person is in contact with a transmission or distribution conductor and is burned severely and quite obviously beyond help, it would be a foolhardy gesture on the part of a squadman to risk his life to save a body. One victim for a coroner is far more desirable than two or more. If high voltages are involved, 13,000 volts and up, the risks involved in moving a line are terrific. Rope should not be used on high-voltage lines unless it is dielectric rope and is absolutely dry. Even hot sticks that linemen use are kept in heated dehumidified trailers, and are tested regularly. Stay clear of extremely high-voltage lines regardless of the circumstances.

Moving lower-voltage lines

There are several methods of moving lower-voltage primary lines. One of these methods is to use a dry rope. Each end of a ¼-inch rope, 100 feet long, should be weighted with ½-pound weights. Put one end of the rope on the ground about 30 feet from the conductor. Throw the other end of the rope under the conductor so that it will be at least 30 feet from the conductor itself. Then toss the end that is on the ground near you over the conductor. You now have the rope looped around the conductor. Go around the broken conductor to both ends of the rope and pull the conductor away from the object or area that you want to clear, being careful not to let the wire touch objects that would endanger the safety of yourself and others.

Dry boards can be used to move a conductor, but the board should be dry and clean and at least 12 feet long. Regular linemen's rubber gloves are good to use if you happen to have them, but they should not be depended on when handling conductors carrying more than 5,000 volts.

"A slow hurry"

In rescue work every second counts. A good squadman will proceed in a slow hurry, evaluating the risks involved against the possible good he could do by taking these risks.

When a person has been lying on a conductor for only a matter of minutes, perhaps only three minutes will make the difference between life and death. The victim can be rolled off the conductor with hot sticks or dry boards, or he can be pulled off with a dry rope. If the conductor is grounded, care should be taken to keep it grounded, because the more current that flows into the ground the less current will flow through the victim's body. Bystanders should be kept at least 100 feet back for their own safety and so that rescuers will have sufficient space in which to work.

When a victim is removed from a conductor more burns may result, but the burns are not of primary importance at this time. Air exchange and blood circulation must be started immediately. Do not touch the victim or any part of his clothing with your hands or feet until he is clear of the conductor.

First-aid treatment of electric shock

Two immediate possibilities in electric shock cases make fast and precise first-aid treatment a vital necessity. When there is a possibility of saving the life of an electrocution victim two factors have to be determined almost immediately: Does the victim have a pulse? Is the victim breathing? Other complications such as burns and traumatic shock will have to be considered and are important, but the first and immediate problem is to restore blood circulation and put oxygen into the victim's lungs so that the blood can carry oxygen to the brain and other vital organs. A knowledge of closed chest cardiac massage and mouth-to-mouth resuscitation is a must at such time. □□

FDNY Awards 27 Medals for Valor

Mayor Robert F. Wagner presented medals for heroism in 1960 to 20 members of the New York Fire Department and to the next of kin of seven other fire fighters who died in the line of duty in 1960. The ceremonies were held at the Firemen's Monument, Riverside Drive and 100th Street, on June 6.

Mayor Wagner also presented three cash awards totaling $1,000. An award of $500 went to Raymond J. Hellriegel, assistant secretary to the department, in recognition of his competent artistry in photography, which contributes to the training of firemen, the welfare of their careers, the study of incendiarism, the apprehension of arsonists and progress and development in fire fighting evolutions.

Battalion Chief George C. Hennessy, 8th Battalion, and Captain John Maloney, Engine Company 65, each received $250 in recognition of their conscientious, selfless and untiring efforts in the revision of regulations for the uniformed force, and the preparation of manuals on training, communications, payrolls and requisitions.

Fireman Joseph G. Peragine, Ladder Company 14, received the James Gordon Bennett medal, traditionally the department's top medal for valor, for rescuing a woman and a child from a fire in the Harlem area on December 24, 1960.

Three fire fighters received medals for rescues they performed at the fire on the U.S.S. Constellation, December 19, 1960.

Medals were awarded to four members of Ladder Company 105, Brooklyn, each of whom rescued several persons at the collision of two airliners last December 16.

Assistant Chief of Department Charles J. Stressler received the Administration Medal for his outstanding ability and devotion to duty in the office of the chief of department.

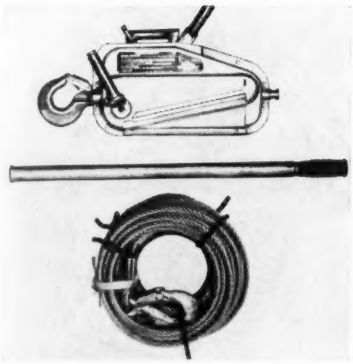
Brush Hazard Rates Rise on West Coast

The Pacific Fire Rating Bureau has announced a premium surcharge for fire insurance on all risks located in designated hazardous brush areas of Los Angeles and Ventura Counties. The bureau said the additional charge is made because "it is unfair to pass along to other dwelling owners the disproportionate losses that have been and will be suffered by residents of these areas which experience has shown are so subject to conflagration."

The bureau said the introduction of the surcharge in these counties was the first step in a program that will eventually be applied to all such areas in California. The rate of increase varies, depending on the class of protection afforded specific areas. Individual property owners have an opportunity to reduce or completely eliminate the surcharge by clearing native brush from around dwellings or other buildings.

What's new . . . among the manufacturers

products · processes · personalities



Griphoist Rescue Tool

Griphoist, Inc., 334 Granite Avenue, P. O. Box 32, Milton 86, Mass., is marketing the Griphoist T-20, claimed to be a lightweight hoisting machine which permits one man to lift or pull in excess of 3,300 pounds. It is said to be useful for motor vehicle and aircraft crash emergency work.

New E & J Emergikit

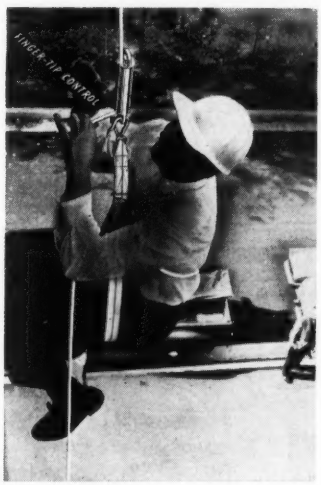
Ohio Chemical & Surgical Equipment Co., division of Air Reduction Co., Inc., 1400 East Washington Avenue, Madison 10, Wis., has announced a new model E & J Emergikit II resuscitator. It features a longer case which is said to enclose and protect the cylinder regulator. It retains the original features of Model I.

Circle-D 12-Volt Light

Natale Machine & Tool Co., Carlstadt, N. J., is marketing a 300-watt portable light which operates from a 12-volt vehicle battery. Constructed of cast aluminum shell with plastic handle, it is said to be effective for use in locations where high voltage would be a hazard.

New Colorful Badges

V. H. Blackinton & Co., Inc., Attleboro Falls, Mass., has introduced a new line of brightly colored fire badges and insignia. Made in gold or silver finish, combined with colored hard enamel, they may be used to color-code the identification insignia of various department units and individuals.

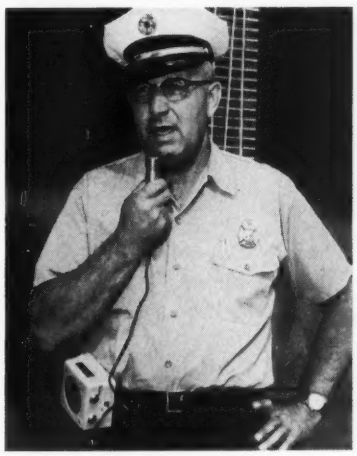


Atlas Sky Genie

Atlas Safety Equipment Co., 179 North 10th Street, Brooklyn 11, N. Y., has developed a new lowering device called the "Sky Genie." It consists of an aluminum shaft and a length of nylon rope. Using the principle of fire fighter life belts, the rate of descent is predetermined by the number of turns taken around the shaft and the weight of the person or object to be lowered. Deceleration, stop or start is said to be controlled by fingertip pressure and the device may be used with a safety belt, boatswain chair, stretcher, etc.

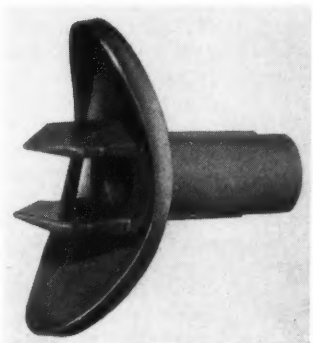
Bombero Bunker Coats

Schneck Textile Fibre Co., P. O. Box 473, Narbeth, Pa., has developed its "Bombero" bunker coats for fire service use. Now being manufactured by Jomac, Inc., Philadelphia, Pa., it features a polyvinyl chloride coating on both sides of a special-base fabric and a permanent 10-ounce all-wool liner. Available in white, black, yellow, or black and yellow combination, a snap-in quilted nylon and Dacron winter liner is optional.



Belt Amplifier

Planetronics, Inc., Easton, Pa., has introduced a transistorized portable public address system designed to be clipped to the wearer's belt. Measuring 4 by 4½ by 2½ inches and weighing 12 ounces, the plastic-cased unit may be used for broadcasting operating instructions during a fire. For emergency signaling purposes it is claimed a fireman can place the microphone next to the speaker, generating a loud feed-back howl, and thus summoning assistance.



MSco Rescue Breather

Medical Supply Co., Rockford, Ill., has announced a compact adjunct for mouth-to-mouth resuscitation called the "MSco Rescue Breather." It is a flexible facepiece equipped with a bite block for wedging between a victim's teeth in event of jaw spasm. It is claimed to provide a tightly fitting facepiece for all adult or child configurations.

Continued on page 936

TOLEDO GASOLINE BLAST

Continued from page 921

literally shot eastward down the Trail, fanning outward slightly to engulf the men and houses.

The driver of the unit was not injured at the time of the accident. Upon climbing down from the tractor cab and noting the seriousness of the situation, he ran down the street to sound the alarm and notify his office. However, he did return to the scene and while assisting the firemen received serious burns.

The Toledo Fire Department report shows that nine engine streams and six 1½-inch lines were used on the fires. A small portion of foam was used in the latter stages of the fight to speed operations. A foam truck was dispatched to the scene by the Standard Oil Company but was not used.

The fire was tapped out at 1:12 p.m. and all equipment was back in service at 7:27 p.m.

Damage is listed as $33,000 to the truck units; a residence at 616 Vinton Street was a total loss (no figure given); 618 Vinton, $6,500; 620 Vinton, $4,000; 624 Vinton, $2,975.

No damage estimate is given for an area of street paving about 100 by 150 feet that had to be replaced. Loss of trees, utility poles, street lights and wires also is not shown. Some small damage also was incurred by Ladder No. 5.

Lessons relearned

Some lessons were relearned: It was proven again that it is well to keep out of line of the ends of cylindrical tanks when there is any likelihood of an explosion. However, in this case it was almost impossible to approach the burning tanker from any other position because of the surrounding terrain and obstacles.

Evidently fire fighters' boots, coats and helmets were of some protection. Deputy Chief Bode was wearing no fire gear. Pictures show him wearing blue uniform trousers and cap, and a white dress shirt. He suffered the most extensive burns.

Private Robert Harrison, driver of Hook & Ladder No. 5, was wearing coat and helmet, but no boots. His legs were very severely burned.

Captain Thomas Alfieri was wearing full gear. He did not have his boots pulled up and suffered serious burns in the area between his knees and the bottom of his coat.

As one veteran fire official put it, "This has made a believer out of me; from now on I wear my boots, coat and helmet regardless of hot weather."

Despite the extent and suddenness of the disaster, emergency services functioned very efficiently. Off-duty firemen manned reserve equipment or reported directly to the scene quickly as ordered. Nearby hospitals actuated planned disaster action so that the 80 injured were cared for quickly and efficiently.

All available private and police ambulances were called to the scene promptly—the private ambulances by a push-button call system at the police dispatchers office; police ambulances by radio.

A flurry of announced plans by state and city officials to introduce bills banning or controlling the movement of vehicles hauling gasoline, explosives or volatile chemicals, immediately after the disaster, seems to have died out. Meanwhile the investigation is continuing by Toledo fire prevention officials and the Standard Oil Company safety engineers. It may be many weeks or months before any definite conclusions are reached. □□

SUPERMARKET FIRES

Continued from page 923

them. In such cases, the lights are directed downward or above the level of sight. This will provide sufficient illumination for the people to see. Afterwards, the lights may be refocused as desired.

Engine company 2½-inch line placement

The first line should advance into store via a center show window. Stream should be directed over heads of people towards ceiling to put water curtain between trapped shoppers and fire area. This will deflect stream downward, acting like a giant sprinkler, and give far greater coverage than spot delivery. Lines should not be advanced too far into store to avoid blocking aisles. People will be rushing to get out of either end and may trip over the hose.

The second line should be brought up quickly to cover the broad frontal area. Both lines operate abreast to provide maximum protection to trapped people. These lines do not impede the egress of the people in that they are escaping via the normal doors and the broken-out show window at the opposite end. As soon as the store is cleared, both lines should be advanced rapidly toward the rear. A third line is brought to rear entrance (if opened) and operates into utility area. Stream should be directed towards ceiling above fire to avoid driving fire and heat out towards main body of store.

Fourth line supplies distributor nozzle on roof to operate into hanging ceiling or fire area in utility spaces depending on conditions.

The fifth line backs up line 3 if there is a single rear entrance; otherwise goes through second entrance to operate on the fire in the same manner as line 3.

As with the night fire, if the involved area is sufficiently large, it may be necessary to use two cellar nozzles on the roof. If so, then line 6 would be placed here.

Danger to adjoining stores

If there are stores adjoining, and fire is suspected of extending via the common party walls, then additional lines should be placed here as follows: Line 7 to store adjoining on one side; line 8 to store adjoining on other side.

Both should be 2½-inch lines wyed off into two 1½-inch lines each, to provide greater mobility and coverage in exposed areas.

Note that line placement is concentrated on holding the fire so as to protect occupants. Exposure protection is not supplied until this primary objective is achieved. This follows the same reasoning as with the assignment of the ladder companies. The primary assignments are made with the viewpoint covering the exposed occupants and removing them to safety before attempting to save property.

Members operating hose lines are cautioned to avoid sweeping display counters with streams. Dislodging canned goods to the floor may impede rescue and fire fighting operations.

□□

Massachusetts to Hold Instructors Conference

The Massachusetts Fire Chiefs Association, the Barnstable County Fire Chiefs Association, the Massachusetts Drillmasters Association and the Massachusetts Department of Education are cooperating in sponsoring the first annual Fire Department Instructors Conference on October 21-22 at the Barnstable County Fire Training School at Hyannis, Mass.

Instructors for the two-day session include: Chief John O'Loughlin, West Hartford, Conn.; Chief John Daly, Hamilton Standard, Windsor Locks, Conn.; Battalion Chief Andrew J. Flanagan, fire training supervisor, State of Connecticut; Battalion Chief Francis J. Sweeney, New Haven, Conn.; Captain James Fox, director of training, Rhode Island; Lieutenant Philip Whitney, Ashburnham, Mass.; Commander Albert Mullin, Rockwood Sprinkler Co., Worcester, Mass.

Details on the meeting may be obtained from Chief Charles A. Hall, Fire Department Headquarters, Harwich, Mass.

America's Most Experienced Fire Hose Producer Always Gives You:

DEPENDABILITY — Every BOSTON Fire Hose length is fully tested to your specifications . . . for pressure, elongation, expansion, twist, warp, and quality of couplings.

QUALITY — All BOSTON Municipal Fire Hose jackets are flexible and rugged, reinforced with Dacron* filler yarn. Highest quality materials plus excellent workmanship provide long service life.

COMPACTNESS — BOSTON'S flexible Fire Hose folds compactly while permitting easy handling: 200-ft. 1½" DJ can be conveniently racked in 4 cu. ft.; 500-ft. 2½" DJ in 22 cu. ft.; 500-ft. 3" DJ in 25 cu. ft. . . . without sacrificing workability.

COMPLETE LINE SELECTION — BOSTON manufactures Municipal Fire Hose for every requirement — in fine and standard weave, 400 and 600 psi, and with water repellent and mildew resistant treatment at nominal extra charge.

Let BOSTON'S experience be your guide to confidence.
Buy from the originator of circular woven fire hose.

AMERICAN BILTRITE RUBBER COMPANY
BOSTON WOVEN HOSE & RUBBER DIVISION
BOSTON 3, MASSACHUSETTS

BOSTON

* DuPont polyester fiber.

False alarms

A socially ambitious young woman made her husband's life miserable trying to get him to rent a more expensive apartment. One evening he came home in good humor. "Good news, dearest," he cried. "We don't have to move. The landlord just raised the rent."

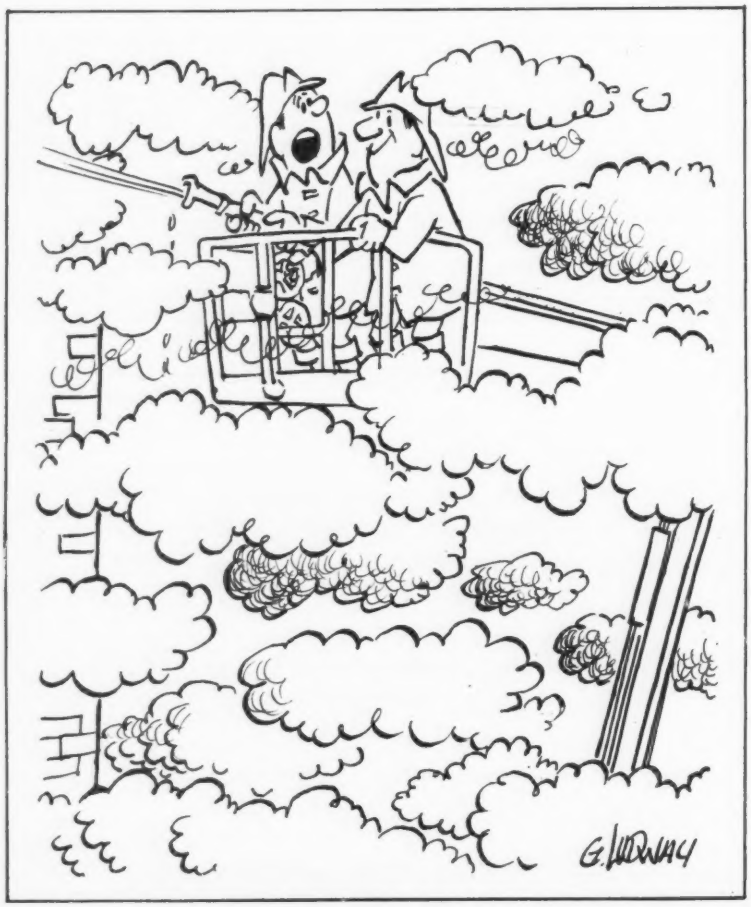
An antique shop has this sign in the window: "You think it's junk? Come in and price it."

Pretty girl: "Do you want to kiss me?"
Simple lad: "No."
"Want to hold my hand and squeeze me?"
"No."
"Then, tell me, why did you bring me out here to the old picnic grounds?"
"I want you to help me collect empty pop bottles. I return them and collect the deposit money."

The trouble with being a leader today is that you can't be sure whether the people are following you or chasing you.
St. Paul Fire Fighters

Posing the father and his college-age son for a picture, the photographer suggested that the boy stand with his hand on his father's shoulder.
"If you want it to look natural," said the long-suffering parent, "could he put his hand in my pocket?"

An Englishman who drove a dog-team sled in the Arctic told his Yankee friend: "I kept yelling 'Tally-ho' but those dogs just turned and laughed in my face."
"You should have said 'Mush'," the American told him.
"Very well," the Englishman said. "The dogs turned and laughed in my mush."



"First time up makes you feel as though you're in a space capsule."

News Item

"Local police are puzzled over finding a car parked in a lonely neighborhood containing a full case of Scotch whiskey. So far, no trace of the owner has been found, but Captain Callaghan is working hard on the case."

A small girl was explaining to her younger brother that it was wrong to work on Sunday. The tad was obviously puzzled.
"But what about firemen?" he puzzled. "Don't they go to heaven?"
"Of course not," snapped his sister, "they're not needed there."
Ontario Fire Fighters' Quarterly

Student: "Did you have fun at your fraternity dance last night?"
Roommate: "It was wonderful. All the men wore tails and the girls wore those Biblical gowns."
Student: "Biblical gowns?"
Roommate: "Yeah, you know. Sort of low and behold."

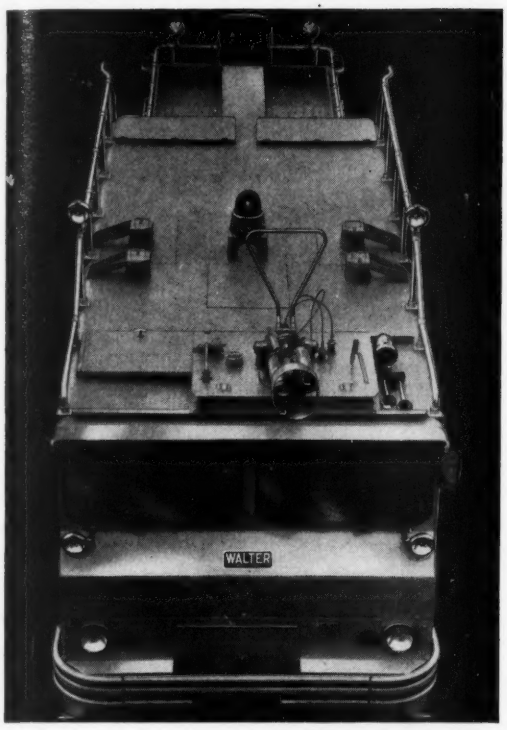
The kiddie party was about over and Junior's mother was bringing in the dessert, a heaping platter of gelatin. As she placed it on the table, it quivered and shook. Most of the children shouted with delight, but one pudgy tow-headed boy started to leave the table. "None of that stuff for me," he said. "It ain't dead yet."

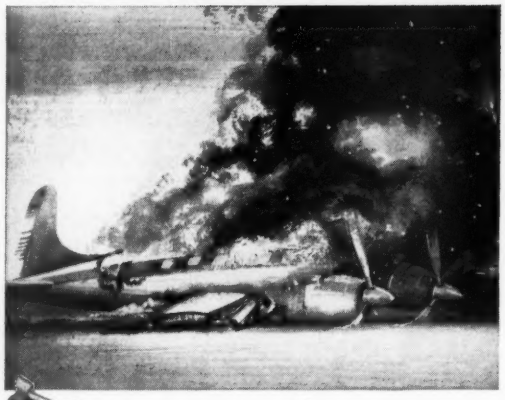
Anyone who is relaxed these days is probably quite nervous about it.

A local busybody, unable to contain her curiosity any longer asked an expectant mother point-blank whether she was going to have a baby.
"Oh, goodness, no," the young woman said pleasantly, "I'm just carrying this for a friend."
St. Paul Fire Fighters

"One of the most tactful men I ever knew," says a businessman, "was the man who fired me from my first job. He called me into his office and said: 'Son, I don't know how we are ever going to get along without you, but starting Monday, we're going to try.'"

Looking over the rim of a volcanic crater, an American tourist in Europe said to another, "Wow, it sure is deep and hot. Reminds you of Hell, doesn't it?"
One of the native guides, hearing the remark, shrugged his shoulders. "These Americans," he said quietly, "they've been everywhere."





SPEED RESCUES AT CRASH FIRES!

Step up your department's life-saving power . . . equip with Rockwood FOAM systems, nozzles, FOAM liquid.

Rockwood equipment, selected for fast, flame-smothering rescue action at airport crash fires, brings the same powerful protection to municipalities, chemical plants, refineries and all industry. Rockwood makes the most complete line of turrets and nozzles, to handle solid FOAM stream, FogFOAM, WaterFOG and solid water stream. Make sure your own trucks are equipped for maximum safety of lives and property! For details on the complete Rockwood line write to Rockwood Sprinkler Company, Portable Fire Protection Department, 444 Harlow St., Worcester 5, Massachusetts.

ROCKWOOD SPRINKLER COMPANY

A Division of The Gamewell Company • A Subsidiary of E. W. Bliss Company

Engineers Water . . . to cut fire losses

Distributors in all principal cities

One of the largest, most effective Aircraft Rescue and Fire Fighting Vehicles is now in service at the Washington National Airport. Basic truck design is by the Walter Motor Truck Company. Fire fighting equipment specially designed by Rockwood includes: (1) 8000 GPM turret nozzle with hydraulic power control from within the cab or direct manual control from cab roof; (2) a ground sweep nozzle beneath the front bumper, which spreads a FOAM blanket to protect truck and crew; (3) nozzles for two handlines, discharging 600 GPM; (4) a FOAM proportioner for the pumping system. With Rockwood equipment, Rockwood FOAM liquid makes a powerful fire fighting combination.

MANUFACTURERS' NEWS

Continued from page 931

Dual Drive Differential

Dual Drive, Inc., 3597 Lee Road, Cleveland 20, Ohio, has introduced what is said to be a true torque-dividing full-time differential. The manufacturer states that the unit, which provides positive drive under all conditions, will improve operating safety, steering and economy.

Scram Dosimeter

Radiation Equipment & Accessories Corp., 665 Merrick Road, Lynbrook, N. Y., has introduced a 3.5-ounce pen-type breast-pocket dosimeter measuring 6 inches in length. The manufacturer claims the transistorized unit will operate continuously for about one year on a single mercury battery and will give an audible chirping sound from a miniature speaker in the presence of radiation. As radiation increases, the chirps blend to produce a tone of rising frequency, warning the wearer to leave the area.

Kamklad Aluminized Cloth

Keasbey & Mattison Company, Ambler, Pa., has introduced a fire-resistant cloth for fire entry and approach garments, fire curtains, baffles, reflective blankets, folding doors and partitions. Called "Kamklad," the new material is a combination of highly reflective aluminum foil and high-quality fire-resistant asbestos cloth.

NEW!

Sky GENIE

FOR SAFE CONTROLLED DESCENT OF PERSONNEL AND EQUIPMENT

For Rescue & Escape Operations by:

- FIRE DEPARTMENTS
- RESCUE SQUADS

EASY-TO-USE! LIGHTWEIGHT! COMPACT!

"SKY GENIE" allows a variable rate of descent, predetermined by the user. One person using only finger-tip pressure, controls descent; either at point of descent, above or below. "SKY GENIE" enables suspension at any point.

WRITE FOR COMPLETE INFORMATION

Manufacturers of ATLAS "Deluxe" Life Saving Nets

available exclusively through

ASE

ATLAS SAFETY EQUIPMENT CO., INC.
175 NORTH 10th ST., BROOKLYN 11, N. Y.
and its authorized distributors
FRANCHISES AVAILABLE

Graflex Teaching Machine

Graflex, Inc., Rochester, N. Y., a subsidiary of General Precision Equipment Corp., has introduced the Audio Graphic System, which may be used for a synchronized sound and slide presentation of job performance methods for training personnel. Basically it consists of an instructor unit employing 35 mm slides and a tape recorder. A slave projector may be employed for group training. By addition of a programming accessory a training staff may prepare its own programs of instruction.

Appointments and Promotions

Harry M. Goodchild has been appointed assistant general manager, Rockwood Sprinkler Co., Worcester, Mass. He was formerly general manager of the Bellofram Corp., Burlington, Mass.

William J. Carroll, Jr., has been appointed sales manager, fixed piping protection department, Rockwood Sprinkler Co., Worcester, Mass. For the past five years he has been in the sales department of the New England area.

Raymond T. Boomer has been named southeastern district factory representative, Clifford B. Hannay and Son, Inc., Westerlo, N. Y. He will supervise sales and marketing in eight southern states with headquarters in Fayetteville, Ga.

William Wade has been elected vice president and technical director, Acme-Hamilton Manufacturing Corp., 320 Park Avenue, New York 22, N. Y.

Carl E. Anderson has been elected president and chief executive officer of E. W. Bliss Company, a major manufacturer of industrial machinery, and parent company of the Gamewell Co., fire alarm telegraph manufacturers. He was also elected to the board of directors of the company. Previously director of general management consultation, Ebasco Services Incorporated, management consulting, engineering and construction firm, he will make his headquarters in Canton, Ohio.

Kit Converts Foam Towers

National Foam System, Inc., West Chester, Pa., has announced a kit to convert old-style chemical foam towers used for fighting fires in flammable liquid storage tanks for use with either chemical foam or modern mechanical foam. The simple modification is said to enable safety departments to make use of chemical towers previously discarded in favor of hydraulic towers.

Ansul Foray Extinguisher

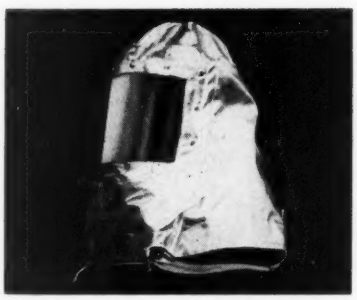
Ansul Chemical Company, Marinette, Wis., has introduced its new dry chemical extinguishing agent claimed to be effective on Class A, B and C fires. Known as "Foray," it is available in Models 30, 20 and 10 cartridge-operated or stored-pressure extinguishers. In both types, Model 10 contains 8½ pounds of dry chemical, Model 20 contains 17 pounds, and Model 30 contains 25 pounds.

Big Beam Emergency Light

U-C-Lite Manufacturing Co., 1050 West Hubbard Street, Chicago 22, Ill., announces that its automatic emergency light "Beam-O-Matic" 2-FA now incorporates a cut-off switch, pilot light, ammeter and milliameter. Previously these extras were available only at additional cost.

E & J Mercury Mark I

Ohio Chemical & Surgical Equipment Co., 1400 East Washington Avenue, Madison 10, Wis., has introduced its E & J Mercury Mark I model resuscitator inhalator aspirator. Based on design suggestions from the field, the unit includes several innovations and with full cylinder weighs 28 pounds.



Globe Safety Hood

Globe Mfg. Co., Pittsfield, N. H., has introduced a new safety hood for use in fighting Class B fires. Made of 3M aluminized rayon fabric interlined with glass cloth and a rigid polyester resin facepiece, said to have extreme high heat distortion point, the unit is claimed to provide full protection for head, face and neck while reflecting over 90 per cent of radiant heat. □□

For PERFORMANCE above and beyond the call of duty

Specify HALE 'QLD'

500-750-1000
1250 GPM

Experienced Firefighters know that HALE Pumps perform "above and beyond the call of duty."

The popular HALE QLD is outstanding for its ability to do just that. This dynamic pump is specifically designed to meet and amply exceed 500-750-1000 and 1250 GPM Class A ratings.

If you are looking for a 2-stage Pumper in this range, the "QLD" is just what you need! It includes latest Design Features, such as:

- The 2" Drive Shafts in Pump Drive Unit—so important for heavy duty service.
- New, simplified Panel-Mounted Relief Valve Control.
- Manual *or* Power-operated Transfer Valve.

Write today for new Bulletin #383 on the "QLD"—one of HALE'S FOUR Basic Pumps, all outstanding for simplicity of design with large smooth waterways for High Efficiency.

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PENNSYLVANIA

Fire Defense Staff and Command Course Schedule Announced

The Training Subcommittee, Robert C. Byrus, chairman, National Fire Defense Advisory Committee, has announced the tentative schedule of the Fire Services National Civil Defense Staff and Command Course to be held October 16-28 at the Department of Defense, Office of Civil Defense Staff College, Battle Creek, Mich. Sixty fire officers from all sections of the country have been invited to attend this pilot course which will then be finalized for instruction in various areas of the country.

The agenda is as follows:

Monday, October 16

Theme: Status as of Now
Origin of Staff and Command Course
Educational Needs of the Fire Service
Role of Municipal Fire Service in National Emergency
Wildlands Protection in National Emergencies Situation
Strategic Briefing on International Situation
Fire Potentials of Nuclear Weapons
Functions of Community Services in Disaster

Tuesday, October 17

Theme: Problems Affecting Fire Operations
Progress in Fire Research
Phenomena of Fire Behavior—Natural Cover Fuels
Phenomena of Fire Behavior—Structural Fires
Fire Services Radiological Operations
Problems of High-Energy Chemical Reactions Affecting Fire Service Operations

Wednesday, October 18

Theme: Compacts
State Compacts
County and Municipal Fire Service Mutual Aid
Role of the Volunteer Fire Departments in Large-Scale Operations
Role of the Military in Wartime Fire Operations
Legal Aspects of Emergency Plans

Thursday, October 19

Theme: Fire Defense Plans
National Civil Defense Plan
Annex 21, The National Fire Defense Plan
Principles of Leadership
The Fire Defense Operations Plan
Public Information and Public Relations

Friday, October 20

Theme: Organization and Management
Principles of Organization and Management
Examples of Structures for Emergency Operations: Military, Forest Service, State and County, Municipal, Utilities

Saturday, October 21

Theme: Review
Staff and Command School Workshops

Monday, October 23

Theme: Intelligence
Communications for Emergency Operation
Fire Defense Communication Systems
Forest Service Pre-Attack Maps
Sanborn Maps
Control Center Operations (Central Command)
Control of Public Information during Emergency Operations

Tuesday, October 24

Theme: Preparedness
Inventories: Manpower, Equipment, Water Supply
Urban Analysis of Baltimore
Calculation of Probabilities for Campaign Fires

Wednesday, October 25

Theme: Fire Service Supply
Elements of a Supply Organization
Support Organization for Fire Defense Operations
Determination of Supply Requirements for Continuous Emergency Operation
Reports and Fire Records

Thursday, October 26

Theme: Strategy and Tactics
Principles of Command Tactics and Strategy
Campaign Fire Case Problems: California Brush Fire, Idaho Range Fire, Florida Timber Fire

Let the Proved Satisfaction of Downers Grove* Help You Select a New Champion

* Downers Grove, Illinois (their fifth Champion)

W. S. Darley & Co., Chicago 12

ESTABLISHED 1908

World War II Fire Behavior Case Study
Nuclear Weapon Incidents and Case Studies

Friday, October 27

Theme: Large-Scale Operations
Map-Reading—Problem Solving by candidates using map exercise technique

Saturday, October 28

Theme: Evaluation
Recapitulation of the Course: Viewpoint of Students, Viewpoint of the National Fire Defense Advisory Committee, Viewpoint of the Training subcommittee
Graduation

MEADOWOOD FIRE DEPARTMENT

Continued from page 927

their activities. After his discharge from the service, Chief Holbrook built a home near the village of Fitzwilliam, N. H. He began to think of the progressive volunteer departments in the midwest, and to conjecture whether some of their new ideas—such as county area fire departments—could be applied in Cheshire County.

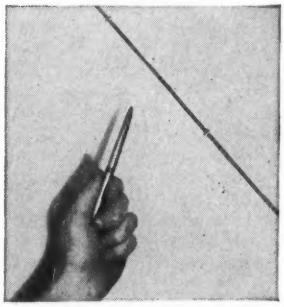
The result of Chief Holbrook's train of thought was the Meadowood County Area Fire Department, a fire service which not only furnishes additional equipment to towns in a whole county, but also provides the state's only modern fire training center. Here any New Hampshire fire department can work on live fires. In addition, Meadowood's research bureau is replete with files covering all kinds of fire equipment, available to any interested fire department member.

Licensed radio operators

At headquarters station, outwardly designed to harmonize with the colonial houses of the region, every modern provision has been made for housing the trucks, including auxiliary electric service and an efficient radio base station with all necessary supporting equipment. Eight licensed women operators provide efficient and modern radio-telephone service at the time of an alarm.

It has been well demonstrated that volunteer units are capable of working with municipal departments, as a well-integrated and efficient force, once the framework has been set up. In many sections of the country the county area plan is firmly established. It has worked so well no one would think of giving it up wherever it has long been in use. The better known mutual aid plan has, of course, received the most general endorsement and is the final answer in combatting serious fires. □□

FOR LOW-COST, DEPENDABLE FIRE DETECTION ALARM!



Kidde Atmo fire detector tubing

KIDDE ATMO: Ideal for schools, hospitals, plants, public buildings, Kidde Atmo Fire Detecting and Alarm Systems use highly sensitive rate-of-temperature-rise detection tubing. Easy to install, simple to maintain, Atmo systems give fast warning in first stages of fire.

Kidde Fyrindex detection element

KIDDE FYRINDEX: Now — dependable fire detection at the lowest possible cost. Kidde Fyrindex features fast-acting, self-resetting detectors, comes in either rate-of-rise, fixed temperature or combination models.

Both Kidde systems are U.L. and F.M. approved; sound alarms locally, at central station, or at municipal fire headquarters; feature one to one hundred zone control and annunciator panels.

For complete information about Kidde fire detection, write today.

Kidde

Kidde Ultrasonic & Detection Alarms Div.
1033 Brighton Road, Clifton, New Jersey
Walter Kidde & Company, Inc., Belleville 9, N. J.

Among the buffs

By PAUL C. DITZEL

New York Buffs shown in grand ballroom of the LaSalle Hotel, Chicago, during recent 9th annual convention of the International Fire Buffs Associates. (Left to right) Bill Grief, Association of Auxiliary Firemen of Manhattan; Bill Herries, also of the A.A.F.M.; foreground, the late Morris Chuvin, formerly dispatcher in the Bronx Central Office, Bureau of Fire Communications, FDNY; background, Jack Mayer, A.A.F.M.; Peter Browne, A.A.F.M.; and Bernard Grandjany, sergeant-at-arms Third Alarm Association, editor of "The Third Alarmer" and treasurer of the A.A.F.M.

Photo by John Moore, Public Relations officer, A.A.F.M.

LOVE LETTER from the Overburdened Postman of Don Diablo Drive to the International Fire Buff Associates, Inc., attention Al Burch of Detroit and his committee:

"Dear Al:

"Thanks to you and your intrepid committee, you have made my life easier, my wife happier, and you are responsible for an almost complete disappearance of that ache in my sacroiliac.

"I refer, of course, to the 'Code for Fire Buffing' which you and your committee wrote and which was published by the IFBA. Thanks to your code, which tells how buffs and clubs can best serve their communities, I don't cart nearly so many letters up that hill on Don Diablo Drive to that double-chinned writer named Ditzel.

"He tells me the reason my load is lighter is due to the fact that your code which you are sending to interested buffs cuts down on the number of requests Ditzel gets for similar information. Now I'm no fire fan myself (collecting used Dixie Cups is my hobby) so I'll let Ditzel tell his readers about the new booklet.

"Thanks again, Al. My sympathies, please, to the Overburdened Postman of Sheridan Road, Chicago, Ill.

"Ditzel is puffing thick pipe smoke down on me, so I'll turn the typewriter back to him. . . ."

Thank you, Sam.

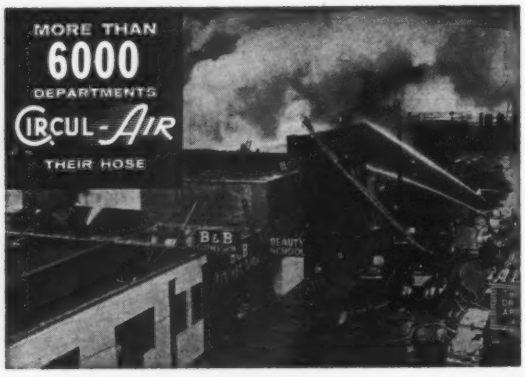
The frequency with which I get letters asking about the availability of information on buffing and how to set up a formal club (I did a feature article on this subject some years ago in FIRE ENGINEERING) indicates the genuine need for a booklet of the type published by the IFBA.

The booklet was officially adopted at the recent convention of the IFBA. Pertinent passages merit quotation here:

"The purpose of a fire buff or fire fan organization in any community should be the banding together of a group of individuals sincerely interested in one or more of the following activities:

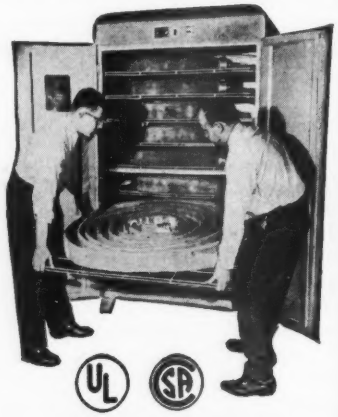
"1. To promote the general welfare of the fire service and allied emergency services in their particular area.

"2. To advance and promote among members the exchange of ideas and experiences, the discussion of subjects and



Don't gamble with the life and serviceability of your fire hose. Good hose will provide years of trouble-free service ONLY if it is washed thoroughly and uniformly, dried quickly and stored safely.

CIRCUL-AIR lengthens hose life and keeps hose in top condition



PORTO-RAK

The fast, modern way to handle, store and load hose.

Saves space. Holds 1800 ft. of 2½" hose—proportionately more of 1½". Roll it right up to the truck for complete hose reload—out of the way when not in use.

ROTO-JET

ROTO-JET Washes, Rinses, Drains hose thoroughly and quickly. Simple, one-man operation. With or without detergents, ashes, dirt, mud and sludge are automatically scrubbed out and flushed away.

FIRE HOSE DRYER

The patented, electrically operated Circul-Air hose dryer circulates prewarmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life. No other drying method is so fast—so economical—so easy to use. Circul-Air is the preferred drying method in over 6,000 leading Fire Departments.

Write for Literature
Booklet (No. 5) "Fire Station Design"
Now Available

THE CIRCUL-AIR CORPORATION
575 EAST MILWAUKEE
DETROIT 2, MICHIGAN

cultivation of friendly social relations among those interested in the science of fire fighting, fire prevention and related emergency functions.

"3. To act as a citizens' public relations group for the fire department and combat unjust criticism or ridicule.

"4. To furnish, maintain and/or operate a canteen service for the fire department and allied emergency services at fires or other disasters.

"5. To act as a nucleus or advanced training group for officers of the civil defense fire fighting forces.

"6. To render such aid and assistance at fires or disasters, other than actual fire fighting, or to include fire fighting if so desired, that may be required or requested by the fire department officer in charge."

The section devoted to membership problems of an incipient club is succinctly stated:

"The screening of individuals for active membership cannot be too greatly emphasized. . . . Every effort should be made to attract responsible prospective members from all strata of the community and to exclude from membership what might be termed the 'undesirable element' in order to maintain a well balanced democratic service organization."

The booklet further offers to furnish, upon request, "whatever additional data and assistance is required by individuals or fire department officials interested in forming a fire buff group in their localities."

Henry G. Nathan, IFBA publicity chairman, who called my attention to the code, mentions that individual copies may be obtained free from IFBA Secretary James M. Kirkley, 2818 Sheridan Road, Chicago 14, Ill. In quantities, the booklet is available from him at 10 cents a copy.

The convention, incidentally, was a whopping success according to the many who wrote to tell me of it. Stuart D. Gootnick, secretary of the 5-11 Fire Fans, Inc., 6456 Mozart Ave., Chicago 45, Ill., said the meeting in that city drew more than 230 registrants.

This column's good friend, Assistant Fire Commissioner Albert Petersen addressed the opening session. Later, Fred Broderick Jr., president of the 5-11 Fire Fans, Inc., was elected head of the IFBA for a one-year term. He succeeds Edward Gill of Chester, Pa.

The Chicago Fire Department provided many demonstrations for the visiting buffs including rides on the Fireboat Joseph Medill, visits to the fire alarm office, and a drill tower show. One of the department's Snorkels was shown off and a catered luncheon was provided by the fire department. Fire Commissioner Robert Quinn installed new officers at the close of the meetings.

Until next month when I'll probably have to beat off the Postman of Sheridan Road, Chicago, who already is demanding equal time, please send your anecdotes, club reports, and comments to me at 4234 Don Diablo Drive, Los Angeles 8, Calif. Regretfully, letters cannot be answered other than through this column. □□

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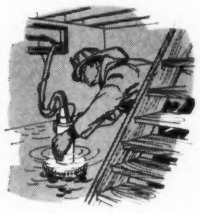

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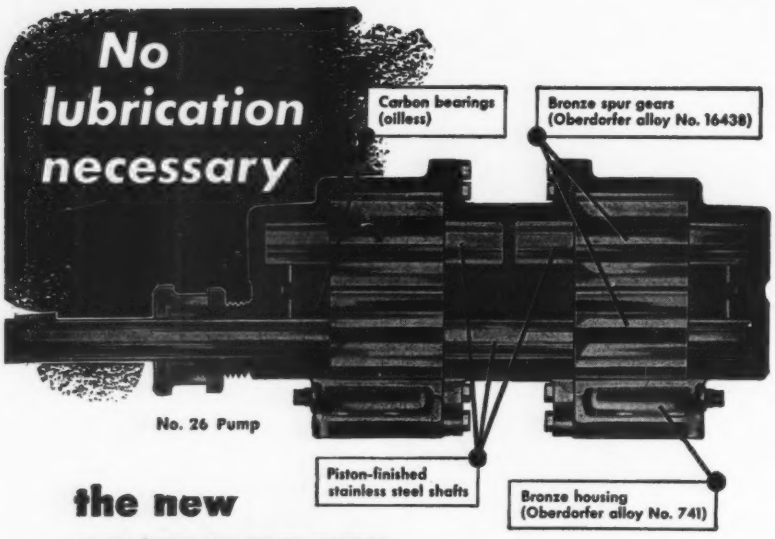
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EDUCATE THEM!

Continued from page 917

floor is divided, is printed on the card, as well as brief evacuation instructions.

The Borden Company

The Borden Company is another business organization that stresses fire prevention to its employees. Every spring and fall, John A. Oetzel, manager of the Safety and Fire Protection Department, writes to the company's 700 plants and branches in the United States and Canada. Oetzel wastes no space on cliches or platitudes. In the letter he sent out in September 1959, he pointed out that the 16 fires in company plants and warehouses during 1958 caused 59 per cent higher losses than similar fires in 1957, and he explained the serious problem fire losses pose for management.

Mr. Oetzel offered four specific suggestions. Among these, was a recommendation that local fire department personnel be invited to go through the company property and familiarize themselves with operations there. He also suggested that inspection teams be sent through the plant, and that recommendations be made and unsafe or hazardous conditions be corrected as soon as possible. The letter also listed 10 points as "a few of the basic exposures which should be checked." As an example, one of these urged: "Inspect all fire doors in your plant giving particular attention to the automatic closing feature. Do not permit fire doors to be blocked open in any manner."

The local management of Borden chemical plants is required to make a quarterly inspection of the plant covering such items as the handling and storage of flammable liquids and dusts, pressure apparatus, floor and wall openings, housekeeping, and possibility of fire spread. An inspection form, signed by the inspectors and the plant superintendent and manager, must be sent to the Safety and Fire Prevention Department at the company's head office.

In addition to these fire prevention efforts, the company's chief fire protection engineer, John H. Jebens, and his staff spend a great part of each year visiting and inspecting the various plants and branches.

FDNY stresses education

The New York Fire Department, particularly since Edward F. Cavanagh, Jr., became fire commissioner, has placed fire prevention on a par with fire fighting. Several times a year

New York conducts intensive fire prevention education campaigns, either city-wide or in areas where fires have increased. To a great extent, these are door-to-door programs and efforts are made to reach every resident in the area and point out the specific hazards to be eliminated. These special campaigns are in addition to the department's year-round apparatus field inspection program, the fire warden program for fire safety in factories, and a concentrated inspection program aimed at lessening hazards in the infamous "Hell's Hundred Acres."

Early this year, the department directed a fire safety education program at New York City's 30,000 longshoremen. Commissioner Cavanagh had fire fighters talk to the longshoremen just prior to the start of their work day at the 10 centers where they report.

Fireman Bill Loomis of the Kingsville, Ohio, Fire Department gave talks on fire prevention to the local school last February. As part of the lecture, he taught the children what to do if their clothing caught on fire. Three weeks later a boy who heard the talk was burning trash for his mother. The fire blazed up when his back was turned, and ignited his jacket. When he realized his jacket was burning, he immediately fell to the ground and rolled over and over, thus smothering the flames. The fire burned two holes in his jacket and he suffered first and second-degree burns on his neck, back and arms. He told Fireman Loomis that if he had not heard the talk at the school, he would not have known what to do and he surely would have run into the house for help.

When the Lake Valley, Calif., Fire Department conducted an essay contest for junior fire marshals, they pinpointed the topic—"What The Junior Marshals Had Done to Eliminate Fire Hazards in Their Homes." The eight winners received a week end in Disneyland with all expenses paid.

About the most effective way to discover and eliminate fire hazards and disseminate fire prevention education is by means of in-service inspections. The Alameda, Calif., Fire Department was one of the first to adopt this method. The program was an immediate success and building fires have dropped each year to what seems a minimum. From over 200 building fires per year to 44 building fires per year is a good record, and Fire Chief William L. Hilbish and his officers are certain that the in-service inspection program should get the credit.

Fire Chief Sidney F. Morse of Billings, Mont., recently told FIRE ENGINEERING that his department has

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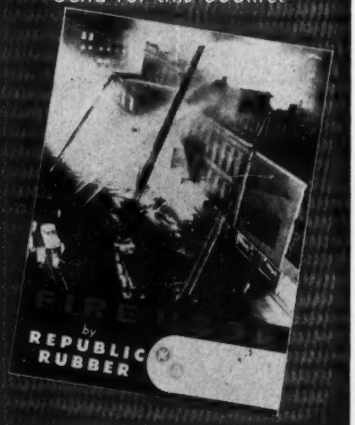

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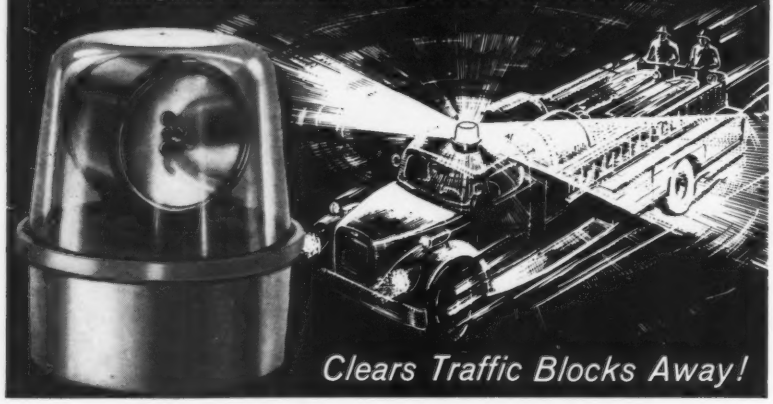

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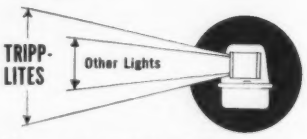

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experienced similar beneficial results. He said: "Home Inspections were inaugurated (in Billings) in 1951 after the loss of two lives. Since that time, not one life has been lost in home fires. Dwelling fire incidents have been reduced from 10 per 1,000 in 1950 to 2.223 in 1960."

The National Board of Fire Underwriters recently reported that home inspections by uniformed firemen now are being conducted by 60 per cent of the public fire departments in the United States. A constantly growing number of volunteer fire departments are offering this service to their communities. About 20 million homes were inspected by firemen, in the interest of home fire safety, in 1960.

On the same day, the National Board announced that although estimated fire losses last year rose to a record high of $1,107,824,000, an increase of 5.8 per cent above 1959, fire prevention is paying off. Robert Z. Alexander, chairman of the National Board's Committee on Statistics and Origin of Losses, said:

"Despite this fourth successive year with fire losses in excess of a billion dollars, our fire prevention authorities are of the opinion that fire prevention engineering and educational activities have been instrumental in holding down the real loss as contrasted with the dollar loss which reflects the progressive inflation of the dollar since 1926." □□

FIRE PREVENTION MESSAGE

Continued from page 925

gasoline-powered lawn mower, the outboard motor and the weekend camper are the main sources of such storage. Where and how this gasoline is kept becomes a great concern of the fire department. A sudden sharp rise of fire deaths among small children pinpointed this problem in Phoenix. Home Inspection programs began turning up more and more gasoline storage, often in glass gallon jugs. Not only this, but a great deal of storage was done in areas containing an automatic, gas-fired hot water heater!

The Phoenix fire department had several articles published on this subject. None of these was the same except for ultimate safety message; if you have to keep gasoline around the home, store it as it should be stored and never near a source of ignition. The lead thoughts in some of these articles were: Glass jugs and their contents, outboard motor boats, and the power mower.

The gasoline storage problem in Phoenix hasn't been whipped entirely, but it has been quite a while since

we've dug the charred remains of a child out of the blackened rubble of a storage room fire.

Another approach to reader interest is the amusing incident. Any fire department can produce its share of these "funnies." When they can be related to the fire prevention story you've got a sure-fire subject. Also most departments can usually produce a cartoonist who can draw reasonably well enough to illustrate this type of article. Editors usually like this combination. Why? Because their readers like them and that's what sells newspapers. Test yourself in your local paper. Flip down through the pages. Doesn't the amusingly illustrated article catch your eye?

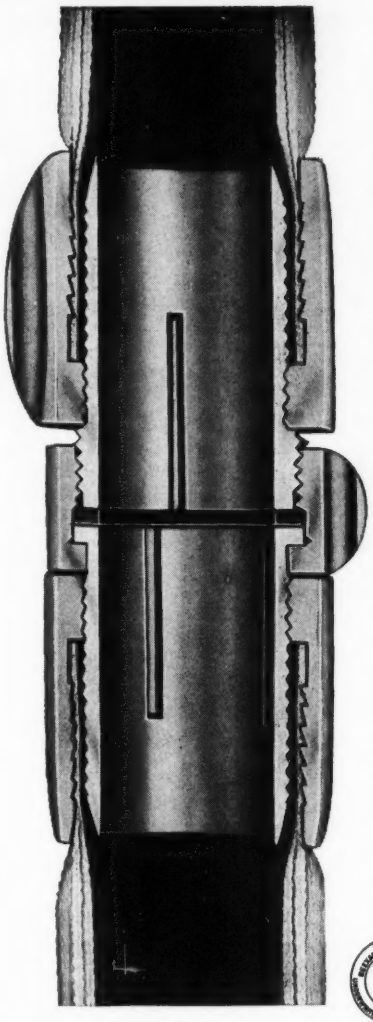
Seasonal articles are good copy too, spring cleanup, fall weed problems, heater and air-conditioning servicing, and special fire department activities. These articles can usually be a little broader in content due to the nature of their subject. A conference with your editor is suggested in these cases.

Small publications

The field is wide open for these fire prevention messages. You might be surprised how many publications are available to you in the average city and eager to be of public service. The writer was. Phoenix has two major-circulation daily papers. In looking about for other outlets for articles, the writer found no less than an even dozen publications that hit the streets anywhere from twice a week to once a month. Their combined circulation was over half a million.

Don't overlook these small publications. They may be far more important than you think. For instance, we were having trouble in a newly annexed area with our home inspection program. We were plagued with an unusually high percentage of refusals due to suspicion and misunderstanding of our motives. Several articles on the purpose of home inspections and fire hazards in the home were published by the two local weeklies serving this area. Doors began to open for us. Inside of one month the refusals dropped some 500 per cent and are now on the same level as the rest of the city.

Visit your local editors. They are nice guys. Have a talk with them concerning your problems and theirs. Maybe you can work something out. Be sure and take a tip from Turk. Be "sneaky." Wrap up your fire prevention messages in tinsel packages with bright ribbons. Make them attractive. When you do, your editors will be more inclined to "buy," and they will be passed on to a reading public. □□



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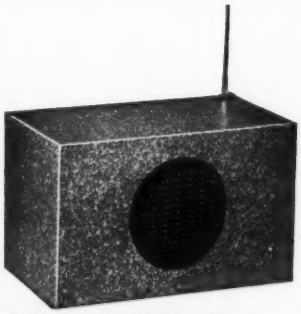

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The round table...

Discussion of current fire department and fire management problems

Wetting Agents in the Fire Service

FOR A NUMBER OF YEARS the use of wetting agents for increasing the extinguishing efficiency of water has been advocated by some fire chiefs, fire protection engineers and scientists. From time to time articles and reports have been published which mention the advantages of the chemical additives in certain specific applications. However, no general consensus of fire chiefs' opinions has been gathered concerning its use in everyday operations.

A reasonable period of time has elapsed since its introduction, and to report the experience gained by fire chiefs, the editors posed the questions found elsewhere in these pages. This is an attempt to ascertain the advantages and disadvantages found under field conditions of use.

Practically all chiefs cite its strong advantages on deep-seated fires where penetration is essential. Rural fire chiefs cite its ability to "stretch" limited water supplies which have been trucked to the scene.

In many cases, on the other hand, fire chiefs feel that high cost mitigates against wholesale use except where water supply is critical. Its great efficiency also creates corrosion problems and pump packing troubles. A few mention that it can be improperly employed at fires and thereby cause increased water damage.

Readers are invited to send their comments on the subject, which will be continued in the November issue, to Round Table Editor, FIRE ENGINEERING, 466 Lexington Avenue, New York 17, N. Y.

The Discussion

H. L. Hales, Chief, Monroe, La.: Wetting agents are used in our department, but only under specific conditions, usually on baled cotton fires. In this section of the state, many thousands of bales are grown, ginned, compressed and stored, not to mention the thousands shipped out of here or through here by train and truck.

We do not use permanently mounted or portable equipment for the use of wetting agents. When necessity demands its use, we carry in our booster tanks a 1 or 2 per cent solution, whichever is deemed more suitable for the fire on hand.

Experience has shown us that with the use of certain wetting agents, the surface tension of plain water is reduced and at the same time its penetration and spread are increased, along with its emulsifying ability.

We find its disadvantages to be negligible. Discoloration is sometimes noticed, especially with a 2 per cent solution. Also, in storage we find that, even though classified as noncorrosive, it shows a tendency, through its cleaning and penetrating action, to accelerate corrosion in booster tanks, certain alloys, cast iron, galvanized or similar materials.

William J. Taylor, Chief, Burbank, Calif.: We use wetting agents in our fire extinguishment operations. Three of the latest engines we have purchased were specified to be equipped with an around-the-pump proportioner for both a wetting agent and liquid foam. The

THIS MONTH'S QUESTIONS

- **Do you now use wetting agents in your extinguishing operations?**
- **If so: (a) Do you use them at all general fires or only for specific applications? (b) Do you use permanently mounted or portable equipment to proportion them into hose lines?**
- **If not, do you intend to adopt wetting agents in the foreseeable future?**
- **What advantages have you found in the use of these agents?**
- **What disadvantages have you been able to determine due their use?**

wetting agent and the foam are supplied to the proportioner by 10-gallon wet water and 35-gallon foam stainless steel tanks.

The one disadvantage for this kind of equipment is that it takes too long to get a proper mixture of the wetting agent through the line when operating at small fires. The principal use for wet water is in smoldering materials where small amounts of water are necessary.

We have also found that most wetting agents are corrosive, therefore making it difficult to retain packing glands in pumps. Leaks in piping are also more prevalent due to the corrosive effect.

In our latest specifications we have now eliminated the around-the-pump proportioner and are going to try a proportioner of the portable type that attaches to the engine outlet, thereby eliminating the necessity for the wet water to be discharged through the pump.

We feel there is a real need for wetting agents in the fire service, particularly in deep-seated smouldering fires. We have found that the period of overhaul and the dangers of rekindle have been greatly reduced.

We have recently been experimenting with a wetting agent that is reported to be noncorrosive.

Harold H. Dean, Chief, Phoenix, Ariz.: Wetting agents have been tried on and off over a period of years. Total use has been small and only on specific applications.

We presently have one pumper equipped with a permanently mounted proportioner; three other pumpers have portable equipment.

We feel that probably with the advent of wetting agents that are less corrosive, a continually greater use in certain specific applications will result.

Our greatest success has been in fires involving bales of cotton or rags, and in common mattress fires.

Our first experiences with wetting agents were very discouraging, resulting from their corrosive action. Our more recent experiences have not shown any particular disadvantages.

Wagner Sorensen, Chief, Reno, Nev.: We do not use wetting agents as a general rule except in rural districts on hay or straw fires. Proportioning equipment is permanently mounted.

We have found that we get better penetration with wet water, but there are disadvantages, namely, storage and the time it takes to get it into operation. Cost, too, is a factor.

Rodney J. Mathers, Chief, Stewart-Lennox Rural Fire Protection District, Klamath Falls, Ore.: We use a wetting agent for specific applications. All our fires are fought from booster tanks as we have no hydrants. We have found that a wetting agent is nearly always an advantage and sometimes a "must."

We use permanently mounted proportioners because of their quick and easy use, once we have determined whether or not to apply wet water.

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Photographed at Chelmsford, Mass. Fire Department. Fire Chief Ernest Byam, Firemen Donald Gray, Allen Mello.

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any disadvantage would be the cost factor. When all water has to be hauled to a fire in tank trucks, and we are fighting a stubborn fire in certain materials or mopping up in others, then the cost of wetting agents could be considered negligible when balanced against time and effort.

Harry J. Coon, Chief, Syracuse, N. Y.: We do carry a limited quantity of wetting agent on our foam apparatus, as it is equipped with an around-the-pump proportioner with provision for either foam or wet water application. However, at this date, the operations of the proportioner have been confined solely to the use of foam.

Carl P. Johnson, Chief, Portland, Maine: We have used some wetting agents in the past for fires in close quarters, such as in sawdust bins where, because of their penetrating effect they have proven advantageous.

In fires over a large area, such as woods and dumps, use of these wetting agents has proven too expensive.

Charles A. Volk, Chief, Norwalk, Conn.: We use wetting agents in our extinguishing operations but only for specific applications. Both permanently mounted and portable equipment are used to proportion them in hose lines.

V. A. Parker, Chief, Cumberland, Md.: We use wet water for specific applications. Proportioners are permanently mounted.

These agents reduce water damage and cut down time in handling fires in overstuffed furniture, mattresses, etc.

We do find that they are hard to store and that permanently mounted proportioners must be cleaned and kept free of corrosion.

James F. Brennan, Chief, Salem, Mass.: We have used wetting agents occasionally for deep-seated woods and brush fires. If it were not for budget limitations and other economic reasons, it would be standard procedure.

Portable equipment is used to proportion them into hose lines. □□

July Fire Losses

Estimated fire losses in the United States during July amounted to $93,113,000, the National Board of Fire Underwriters reported.

This $93,113,000 loss represents an increase of 12.2 per cent over losses of $82,998,000 reported for July 1960, and a decrease of 9.9 per cent under losses of $103,348,000 for June of this year, according to Lewis A. Vincent, NBFU's general manager.

Losses for the first seven months of 1961 now total $728,130,000, an increase of 10.8 per cent from the first seven months of 1960, when they amounted to $656,969,000.

These estimated losses include an allowance for uninsured and unreported losses.

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PUBLICATIONS

"How You Can Build and Use Table-Top Fire Prevention Kits," by Captain Ira A. Anderson, fire prevention officer, Rialto, Calif., Fire Department, is a how-to-do-it book which describes and illustrates five useful demonstration apparatus which may be made by the reader. Included is a lecture used by the author when presenting a program featuring the equipment. The book which has 96 pages with paper cover, is published by Ira A. Anderson, P. O. Box 332, Rialto, and sells for $3.00.

Call the Firemen, by Paul W. Kearney, a 15-page fire safety booklet designed for reading by laymen, tells why prompt fire alarms are necessary and gives a running account of the action that follows when an alarm is received by the fire department. Published by Birk & Co., Inc., 3 West 57th Street, New York 19, N. Y., it sells at 10 cents per copy, with quantity discounts.

Fire Fighting Guidance — Nuclear Weapons. A Department of the Air Force pamphlet in its Fire Protection and Aircraft Rescue series, AFP 92-1-1 is available from the Government Printing Office, Washington 25, D. C.

Peacetime Radiation Hazards in the Fire Service. The first two manuals for use in a new state instruction program have been prepared by the U. S. Department of Health, Education and Welfare and the U. S. Atomic Energy Commission. Based upon the four-hour orientation unit, the 31-page student manual, OE-84015, costs 30 cents; a 42-page instructor's guide, OE-84014, 35 cents. Both may be ordered from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. □□

Letter to the editor

Sprinklers and Safety

To the Editor:

I read with interest and much reservation the article in your May 1961 issue entitled "Fire Safety for College Dormitories." It is felt that this article could mislead the laymen or persons not experienced in fire protection matters to believe that "early warning, protected exits, and reduction of flame spread" are the complete answer to 100 per cent protec-

Continued on page 955

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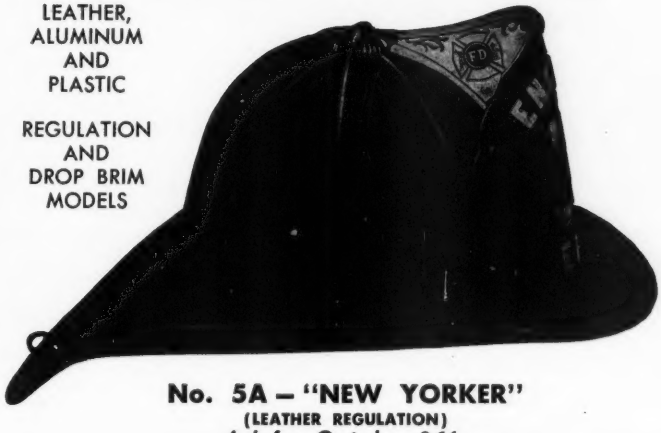

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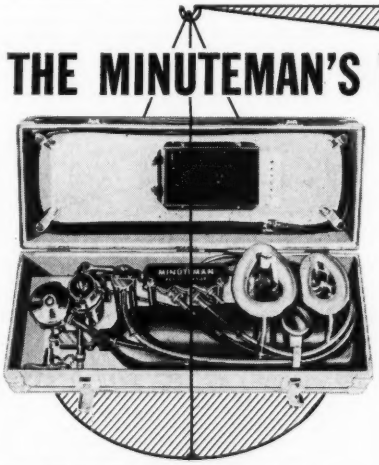

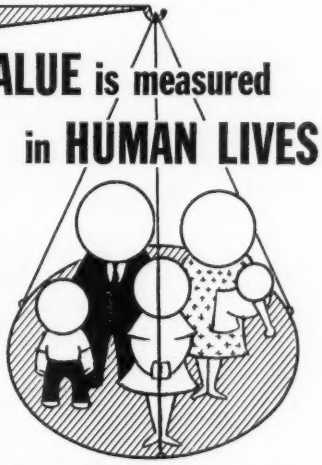

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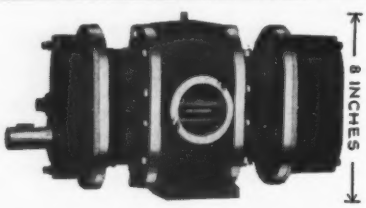

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Fire colleges

Arizona State Fire Training School—Oct. 19-21, Phoenix College, Phoenix. Sponsored jointly by State Department of Vocational Education, Phoenix College, Phoenix Fire Department and the Arizona Firemen's Association. For information write Assistant Chief Jake Siken, Director, c/o Phoenix Fire Department, 49 South 1st Street, Phoenix 4, Ariz.

Indiana Fire Service Training Program—Oct. 30-Nov. 3, **Fire Inspectors Course.** All courses to be held at Purdue University, Lafayette, Ind. For information write, Professor Shelby Gallien, Director, Public Safety Institute, Division of Adult Education, Purdue University, Lafayette, Ind.

Massachusetts Drill Instructors Conference—Oct. 21-22, Hyannis, Mass. For information, write Leighton F. Peck, Chief of Fire Department, 399 Main Street, Falmouth.

Michigan Fire Training Program—Oct. 16-20, **Basic Firemanship Training;** To be held at the Civil Defense and Disaster Training Center, University of Michigan. For further information, write, Francis Hartman, Supervisor, Firemanship Training Program. The Civil Defense and Disaster Training Center, University of Michigan, North Campus, Ann Arbor, Mich.

Morris County Fire School—Nov. 7—Ventilation, Florham Park Fire Department; Dec. 5—Panel Discussion, Denville Fire Department. For information, write Robert H. Wright, Publicity Chairman, Long Hill Lane, Chatham, N. J.

New Jersey State Fire College—Nov. 17-19—**Fire Officers Training Course.** To be held at the National Guard Training Center, Sea Girt, N. J. For information, write Robert L. Tarbox, Director, Industrial and Fire Division, New Jersey State Safety Council, 24 Branford Place, Newark 2, N. J.

North Carolina Pump School — Oct. 16-18, Charlotte, N. C. For information, write Chief Charles L. Burkett, Fire Department Headquarters, Salisbury, N. C.

Ontario Fire Training Program—Oct. 16-20, Basic Fire Inspection Practices Course; Oct. 23-27, Mutual Fire Aid Forum. All of the above courses will be held at the Ontario Fire College, Gravenhurst, Ont. Regional fire schools will be held Oct. 16-20 in Essex for the County of Essex; and Oct. 23-27 in Chatham for the County of Kent. For information, write M. S. Hurst, Ontario Fire Marshal, 204 Richmond Street West, Toronto 1.

Peacetime Radiation Fire Instructors School. Nov. 27-Dec. 1 at Richmond, Va. This school is for approved fire instructors only. For information, write R. Lawrence Oliver, State Department of Education, Trade and Industrial Service, P. O. Box 657, Harrisonburg, Va.

Pennsylvania State Firemen's Training School—Oct. 30-Nov. 1, **Basic Fire Fighting;** Nov. 13-17, **Advanced Fire Fighting.** Oct. 16-20, **Fire Department Pumps (Basic);** Oct. 23-27. **Fire Department Pumps (Advanced);** Nov. 25, **Week-End Special.** All courses will be held at Training School in Lewistown. For information, write Art Espey, Director, P. O. Box 631, Lewistown.

South Carolina Fire Fighter Training Service. Regional schools to be held as follows: Oct. 9-13, Union; Oct. 16-20, Hemingway; Oct. 23-27, Batesburg; Oct. 30-Nov. 3, North Augusta; Nov. 6-10, Mauldin; Nov. 13-17, Calhoun Falls; Nov. 20-24, Jackson; Nov. 27-Dec. 1, Hill Top, Spartanburg; Dec. 11-15, Metropolitan Sub. District B. For information, write H. B. Wells, Instructor, Route 1, Box 119, Prosperity, S. C.

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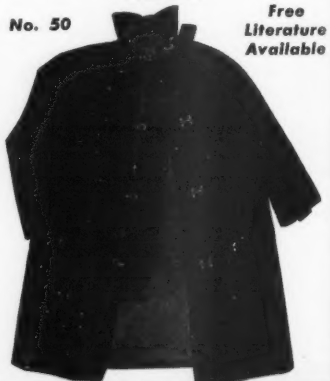

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Southwestern Arson Investigation Institute—Oct. 17-21, Extension Study Center, North Campus, The University of Oklahoma, Norman. For information write James Robinson, Coordinator and Legal Consultant, Southwest Center for Law Enforcement Education, Extension Department of School and Community Services, The University of Oklahoma.

Rhode Island Firefighters Instructors Association—October 13-15 at Newport, R. I. For details contact, Capt. Michael J. Fox, State Supervisor of Firemen Training, 903 Broadway, East Providence, R. I.

University of Miami Fire Investigation and Subrogation Seminar—Nov. 27-Dec. 1 at the Carillon Hotel, Miami Beach, Fla. For information write Dr. Dan Steinhoff, Jr., Dean, Adult Education, University of Miami, Coral Gables, Fla. □□

Magnesium Fire Injures Five Birmingham Firemen

Five Birmingham firemen were slightly injured at a fire in a truck trailer loaded with magnesium billets on March 30. Stations 5, 8 and 9 answered the alarm after the trailer had been pulled from the loading dock of a trucking firm. A possible multialarm fire was averted by the quick action of the truck driver, who pulled the trailer four blocks out in the open near a hydrant. A slight explosion occurred when a stream of water was thrown on molten metal blowing ashes and particles of metal on the firemen. The fire was later extinguished by large fog nozzles in approximately five to six minutes by gradually cooling the billets below their ignition point.

Robert Sams

Coming events

Oct. 5-7—The Fireman's Association of the State of Pennsylvania. Annual meeting, Scranton, Pa. For information contact Arthur C. Potter, Secretary, P. O. Box 703, Lewistown, Pa.

October 11—Southern California Conference of Fire Prevention Inspectors. Monthly meeting. Los Angeles. For information, write Ira A. Anderson, Corresponding Secretary, c/o Fire Department, Rialto, Calif.

Oct. 19-22—Nebraska State Volunteer Firemen's Association. Annual meeting, Norfolk. Secretary-Treasurer, Russell D. Salak, P. O. Box 312, Schuyler, Neb.

Oct. 30-Nov. 1—National Fire Protection Association. Fall Conference, Hotel President, Kansas City, Mo. For information write Percy Bugbee, General Manager, 60 Batterymarch Street, Boston 10, Mass.

November 8—Southern California Conference of Fire Prevention Inspectors. Monthly meeting, Fontana. Corresponding Secretary, Ira A. Anderson, c/o Fire Department, Rialto, Calif.

Nov. 27-Dec. 1—University of Miami Fire Investigation and Subrogation Seminar. To be held at the Carillon Hotel, Miami Beach, Fla. For information, write Dr. Dan Steinhoff, Jr., Dean, Adult Education, University of Miami, Coral Gables, Fla. □□

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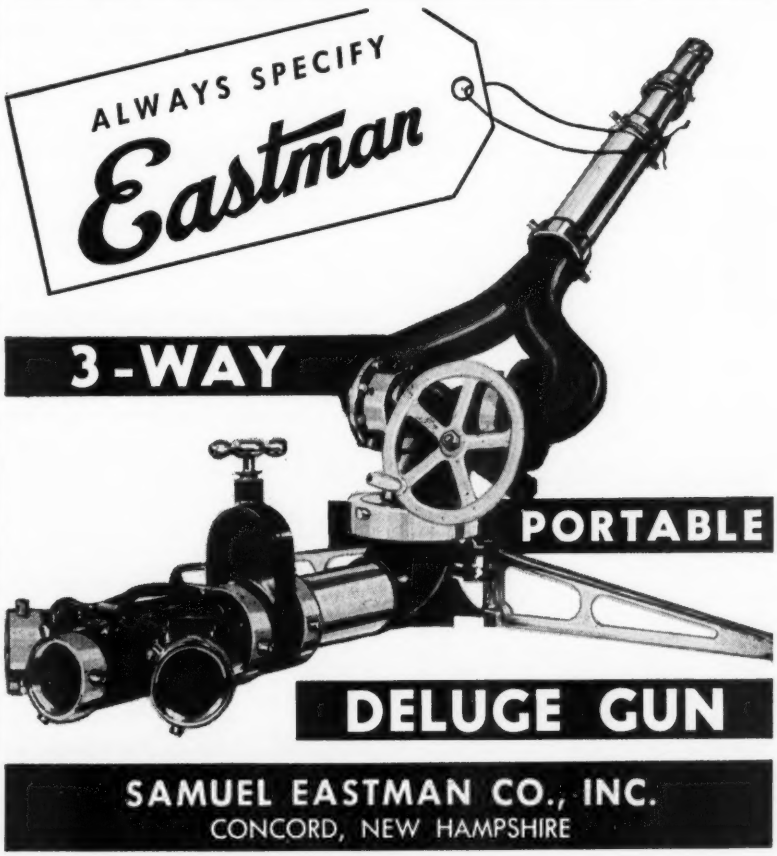

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What's burning

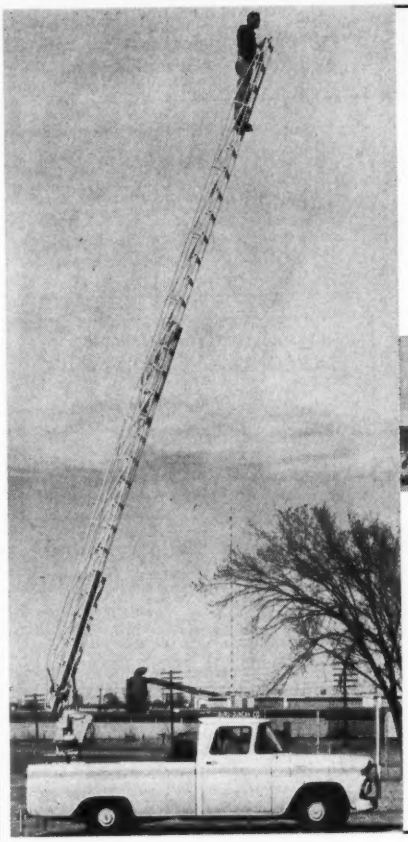
The following list includes fires of $10,000 and over in the United States and Canada for the period from August 1st to August 31st.

Florala, Ala.—Fire starting in a women's apparel store severely damaged several business houses in the downtown area.
Prichard, Ala.—Prichard Rug and Shade Co. destroyed; Nathan Furniture Co. next door damaged. Lightning.
Romoland, Calif.—Farm buildings of Clyde A. Smith destroyed.
San Francisco, Calif. — Apartment dwelling, liquor store and lanudry damaged.
Stamford, Conn.—Bamber Foundry damaged. Possibly started by two juveniles.
Milford, Del.—Sussex Poultry Co. damaged.
Newark, Del.—Newark Medical Building owned by Medico-Dent Inc., destroyed.
Washington, D. C.—Three-story brick apartment damaged.
Washington, D. C.—Best Food Supermarket, Avondale Beauty Salon, Alex Browdy Liquor Store, and Blue Ribbon Cleaners, Shopping Center, heavily damaged. Fire and explosion.
Washington, D. C.—Ted Lewis' Restaurant damaged.
Hinesville, Ga.—Three business firms downtown destroyed.
Sterling, Ill.—National Cylinder Gas Co. plant, Northwestern Steel & Wire Co. and office of Chapman Bros. Co., damaged by fire and explosion.
Clarion, Iowa—Evans-Kay Lumber Co. destroyed.
Davenport, Iowa—Six buildings on Fred Carsten's farm destroyed.
Fort Dodge, Iowa — Two buildings housing United Roofing Co., Fort Dodge Boat Co. and Sketeway roller rink, destroyed.
Okoboji, Iowa—Elm Brooks Country Club housing shops owned by Roger Poole and Eddie Quinn, destroyed.
Sioux City, Iowa—Vacant three-story Curtis Sash & Door Co. plant damaged.
Auburn, Me.—Barn on Raymond and Maurice Keene farm, destroyed.
Brunswick, Me.—Marriner Mill, sawmill, damaged.
Houston, Me.—Plant 1 of Aroostook Potato Products, Inc., starch factory, damaged.
Yarmouth, Me.—Old Westcustogo Inn on Route 88 damaged.
Cambridge, Md.—Caldwell Casting and Die Co. plant and Home Beautiful Decorating Co., destroyed. Sparks from acetylene torches.
White Marsh, Md.—Manhattan Supper Club destroyed.
Winchester, Mass.—100-year-old Chapin School building presently housing Winchester Building Material Co., destroyed.
Bay Port, Mich.—Bay Port Lumber Co., adjacent garage, gasoline station and office building, damaged.
Birmingham, Mich.—Business block housing Varsity Shop sports goods store, Sweeney's Shoe Store, Saylor Electrical Co., professional and business offices, damaged.
Jackson, Mich.—Westwood Inn, restaurant, 4 miles west, destroyed.
Berlin, N. H.—75-year-old New Berlin Hotel, damaged.
Dover, N. H.—Central Avenue apartment dwelling housing Ray's Shoppe, Campbell's Shoe Store and Harvey's Bakery, damaged.
Middlesex, N. J.—Orlando Cabinet Co. destroyed.
Mountain View, N. J.—Imperial Outdoor Furniture Co. destroyed.
Trenton, N. J.—Hoffman's Paint & Hardware Store destroyed.
Trenton, N. J.—Robert Hall Clothing Store in downtown area damaged.
Weehawken, N. J.—New York Central Railroad terminal and ferryhouse, Railway Express Co. and Genser Trucking Co., destroyed; Stopper's Liquor Store, dry goods store, railroad police headquarters and several freight storage sheds damaged.
West New York, N. J.—Buildings of Harbor Tank Storage Co., Jagel Coal & Oil Corp., Gallagher Bros. repair yard, 12 barges and coal dock and pier formerly owned by New York, Ontario & Western Railroad, destroyed. Discarded cigarette.
Altamont, N. Y.—Ward G. Ackerman Inc. feed mixing and storage plant destroyed.
Cortland, N. Y.—Cortland Discount Center, housing six stores damaged.
Elmira, N. Y.—Koury Co. warehouse, 3 miles south, destroyed. Defective wiring.
Naples, N. Y.—Naples Theater building destroyed. Defective wiring.
Upper Jay, N. Y.—Monaco's Restaurant damaged.
Westfield, N. Y.—Kaypeck Co. grapejuice plant, destroyed.

Sanford, N. C.—Tobacco warehouse, owned by Wilkins Corp., destroyed.
Cleveland, Ohio—Wilcox Transfer Co., electrical appliance distribution warehouse, destroyed.
Delphos, Ohio—People's National Bank damaged; Vogt & Vogt Restaurant, a dental, a law, and a manufacturer's office destroyed in adjoining building. Three clothing stores sustained smoke and water damage.
Hilliard, Ohio—Building housing Holliday's Supermarket and apartments, destroyed.
Oklahoma City, Okla.—Former maintenance building of Armour & Co., to be razed, destroyed; power plant and "kill-building" damaged.
Clatskanie, Ore.—Beaver Lumber Co.'s plant damaged.
Eugene, Ore.—Armstrong Lumber Co. plant destroyed. Burner sparks.
Klamath Falls, Ore.—Saw mill of Clay Thomas damaged.
Portland, Ore.—Portland Air Base commissary destroyed.
Bethel Park, Pa.—Superior Motor Coach Co. garages, business office and showroom damaged. Defective wiring.
Horsham, Pa.—Bargain City, U. S. A., Department Store damaged. Navy jet plane crash.
Middletown, Pa.—Three greenhouses at Langhorne Garden Flower Shop, U. S. 1, damaged. Short circuit.
Troy, Pa.—Two barns and several outbuildings on John Burney farm, destroyed. Defective wiring.
Greenville, S. C.—Grapette-Bireley's Bottling Co. plant, owned by Coca-Cola Co., at Verner Springs, Sans Souci, destroyed.
Hartsville, S. C.—Butler School destroyed.
Lavinia, Tenn.—Lavinia Consolidated Elementary School building destroyed.
Madisonville, Tenn.—Bud's Supermarket destroyed; adjoining Kefauver Hotel housing Taylor's Bargain Store, Journell Jewelers, Virgil Talents Barber Shop and Sloan & Lewis Furniture Store, damaged.
Memphis, Tenn.—Weingarthen Food Center No. 6 destroyed; adjoining TG & Y Variety Store damaged.
Memphis, Tenn.—Kimberly-Clark Corp. warehouse, owned by Memphis Compress and Storage Co., damaged.
Corpus Christi, Tex.—Howell Refining Co., damaged. Explosion.
Salt Lake City, Utah—Reilly Atkinson & Co. building supply firm destroyed. Fumes from overturned tile adhesive can seeped to water heater.
White River Junction, Vt.—Twin State Fruit Co., wholesale grocers' warehouse, destroyed; Beacon Grain Co. and three cars of Boston & Maine Railroad, damaged.
Chehalis, Wash.—New England Shake Mill, destroyed.
Dayton, Wash.—Sunnybrook Cold Storage, Inc., destroyed.
Sedro Wooley, Wash.—Main building of Northern State Hospital, damaged. Faulty air-conditioning unit.
Yakima, Wash.—Radio Station KIT and Western Auto Co. store, destroyed.
Weirton, W. Va.—Young Democratic Club damaged.
Milwaukee, Wis.—Seidel-Thiele Tannery Inc., damaged. Piece of leather became entangled in a conveyor belt and lacquer on leather burst into flame.
Milwaukee, Wis.—Railroad Salvage Co., a retail furniture outlet, damaged.
Prescott, Ont.—Queen Alexandra Hotel destroyed.
Toronto, Ont.—Victoria Building Supplies Ltd. and Columbia Lumber Ltd., damaged. □□

Aircraft for Forest Fires

The New Jersey State Department of Conservation and Economic Development recently announced that chemical bombing techniques will be employed by aircraft to fight forest fires in the state during 1961. Fire retardant slurries employing bentonite with a special dye added will be used. The dye is said to permit aircraft pilots to see from the air where previous drops were made.



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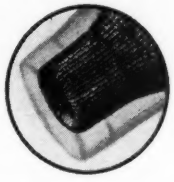

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LETTER TO THE EDITOR

Continued from page 949

tion for masonry buildings having combustible interiors.

The idea that "early warning, protected exits, and reduction of flame spread" is all that is required for protection is fostered in the article by Proposal No. 3 which reads "That the building be equipped with modern fire protection devices and materials." This same theme is emphasized later in the article when the following sentence appears: "The completion, testing and acceptance of the physical rehabilitation left the safety engineer in a most happy mood."

It appears that the College Board and board advisors either overlooked or rejected the most desirable form of protection for their dormitory, namely, automatic sprinkler protection fed from an adequate water supply. Early warning, protected exits, and reduction of flame spread are all very desirable and should be part of an over-all fire protection scheme, but they should be used in conjunction with full automatic sprinkler protection where life safety and building protection are needed. The three items of protection which were provided simply detect a fire and offer some determent to its spread and allow the building occupants to possibly escape. They cannot contribute anything to the fighting of a fire or the extinguishment of a fire in its incipient stages. Full automatic sprinkler protection, connected to an adequate water supply, not only detects the fire but fights it at its source. As you know, the efficiency of full automatic sprinkler protection has been proven by its past record in all types of fires for all types of construction and occupancy.

Automatic sprinklers can and will extinguish or control a fire in this type of building occupancy and by their operation they can prevent the building occupants from having to use the new fire exits provided. The automatic sprinkler system can detect, warn through its alarms, and most of all, fight the fire and control it.

C. W. Conaway
Assistant Chief Engineer
Factory Insurance Association
Hartford, Conn.

Book shelf

RESUSCITATION OF THE UNCONSCIOUS VICTIM *by Peter Safar, M.D., and Captain Martin C. McMahon, 4½ by 7½ inches, 79 pages, paper cover; published by Charles C. Thomas, 301-327 East Lawrence Avenue, Springfield, Ill.; price $2.00.*

This is the second edition of a very popular pocket manual for rescue breathing written by two of the foremost authorities on the subject. □□

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Comes as a complete unit ready to thread to standpipe. Universal in action. Locks in position — can be used unattended. Used on either trucks or as fixed protection in hazardous locations. Write for further information.

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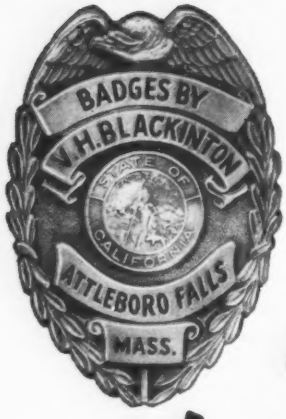

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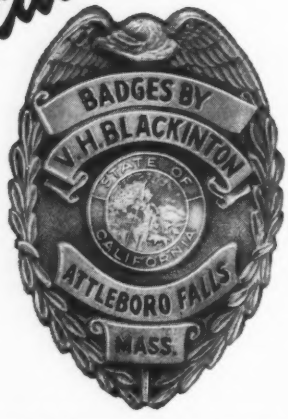

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What Does Rhodium Plate Look Like?

It is brilliant white-silver in color, unlike the bluish tinge of Chrome Plate.

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FIRE ENGINEERING

OCTOBER, 1961

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